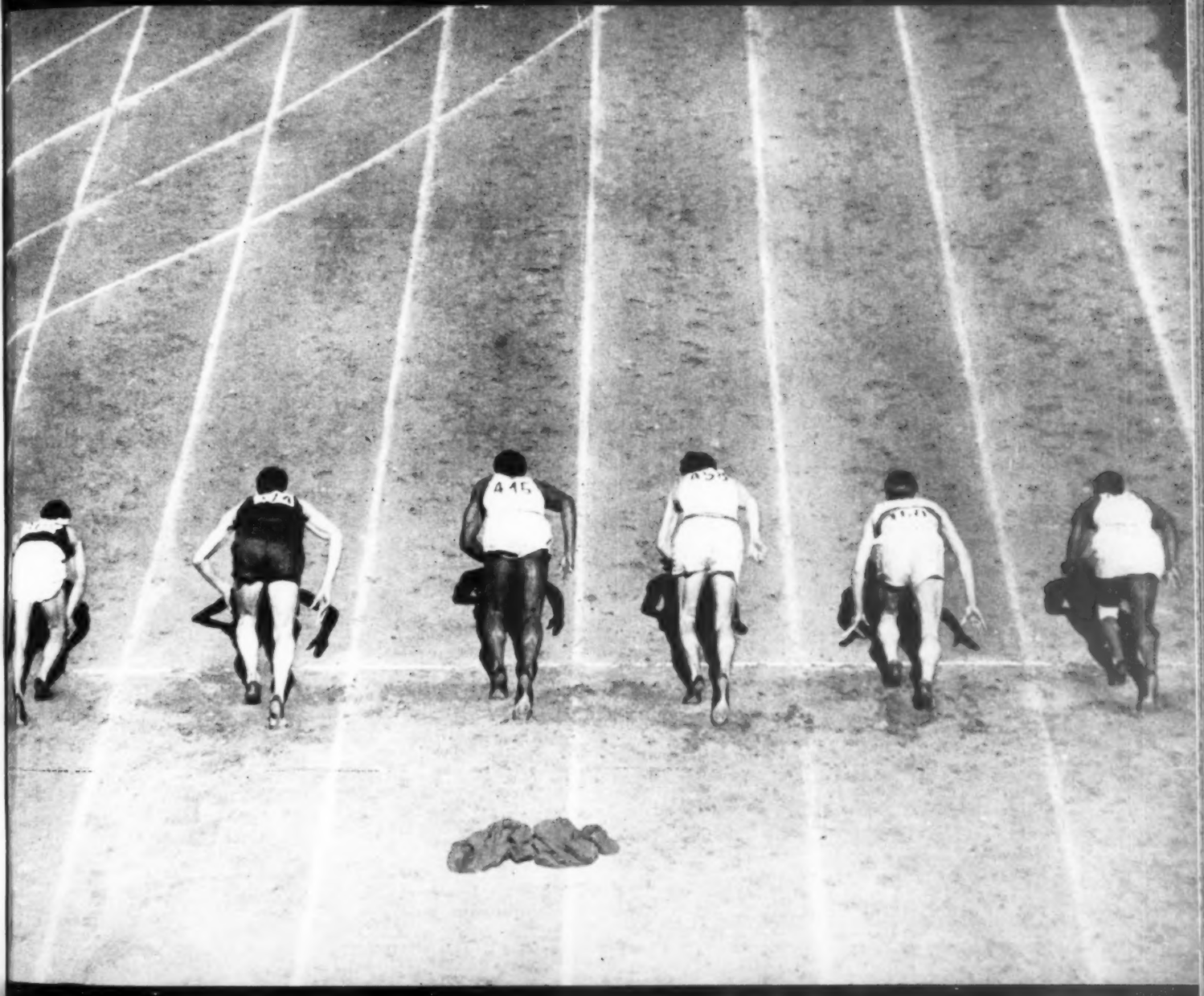

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IT MAY be only a small difference between "safe" and "out," but it's an important one in a ball game. Every coach and trainer knows that, and every coach and trainer knows that the difference between safe and unsafe equipment is just as important. Even the best athletes cannot get good results in any sport without adequate equipment. Not only is poor equipment unsafe, it hampers performance—it is bad for morale. To get winning teams, the best of everything must be used.

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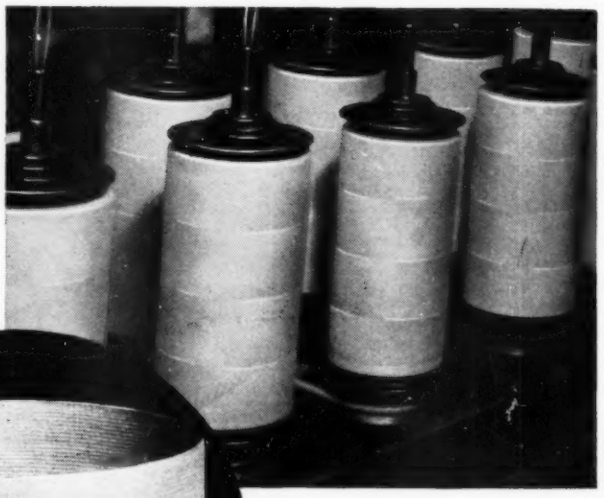

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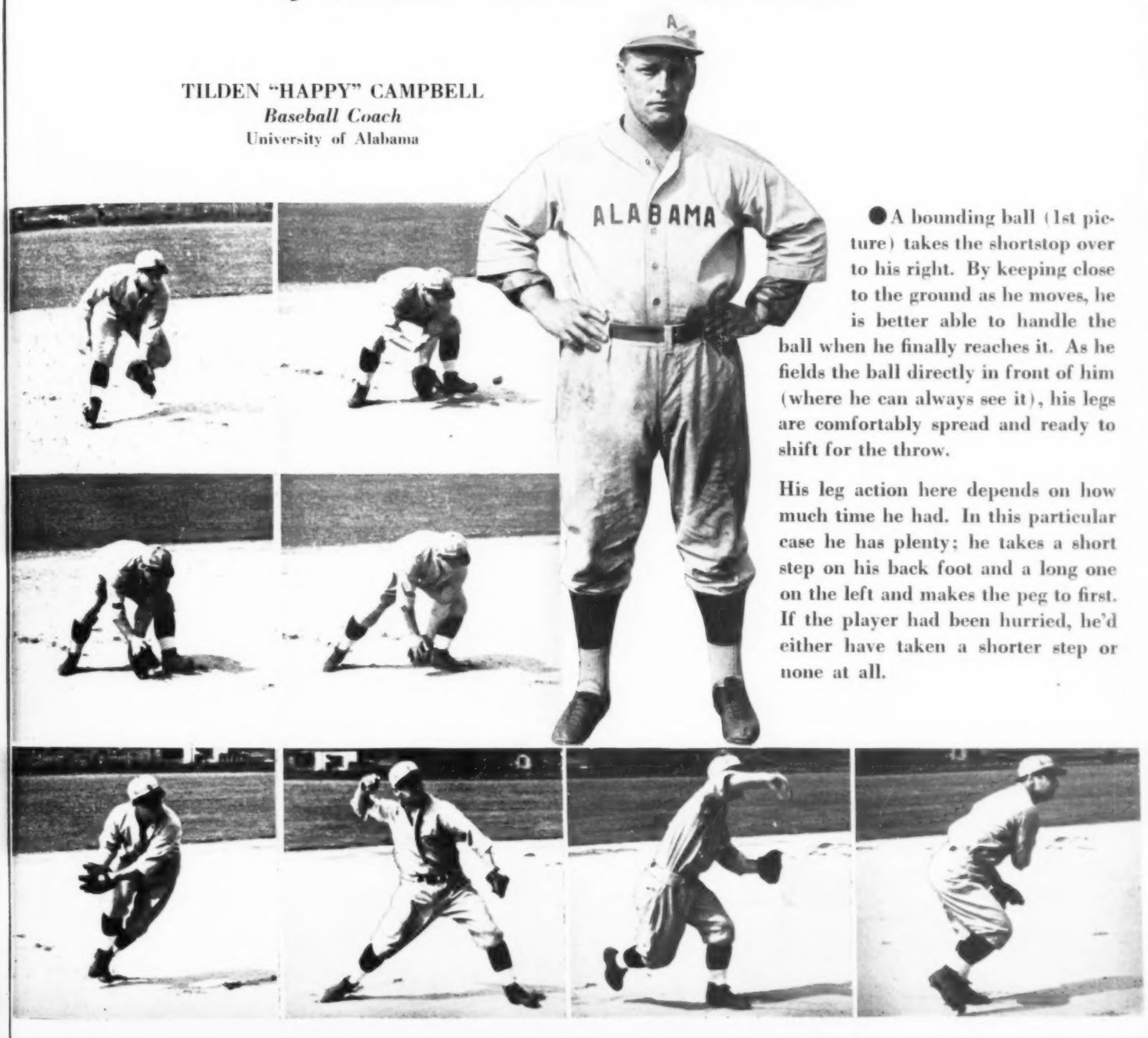
BULLETIN . .

SHORTSTOP FIELDING

By TILDEN "HAPPY" CAMPBELL

TILDEN "HAPPY" CAMPBELL
Baseball Coach
University of Alabama



● A bounding ball (1st picture) takes the shortstop over to his right. By keeping close to the ground as he moves, he is better able to handle the ball when he finally reaches it. As he fields the ball directly in front of him (where he can always see it), his legs are comfortably spread and ready to shift for the throw.

His leg action here depends on how much time he had. In this particular case he has plenty; he takes a short step on his back foot and a long one on the left and makes the peg to first. If the player had been hurried, he'd either have taken a shorter step or none at all.

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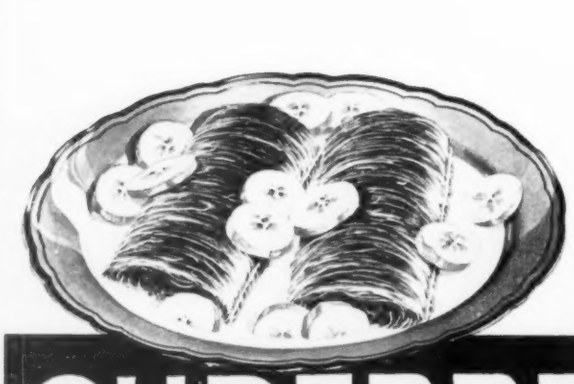

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SCHOLASTIC COACH

Reg. U. S. Pat. Off.

IN THIS ISSUE VOL. 7, NO. 8

Editor: JACK LIPPERT Managing Editor: OWEN REED
Assistant Editor: H. L. MASIN

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IN THE MAILBAG

Scholastic Coach is offering a prize of $10 to the reader who suggests the best title for a column to be conducted by Mrs. Louise M. Matulis for coaches' wives, on the style of Bill Wood's "Coaches Corner." In last month's "Here Below" we published the first of these columns and invited our readers to suggest a permanent title. The response was excellent, and four of the letters we received follow. All entries must be in the mails no later than April 20.

TO THE EDITOR:

After reading in the March Scholastic Coach the column pertaining to the coach's wife, I want to tell you that I think it's a good idea. I always read the magazine and I'm sure hundreds of other wives do, too. I suggest we call it "The Helper's Ideas," for after all, it is our aim to help our husbands with the job, and believe me it's a 24-hour one.

MRS. WILLIAM D. GRAVES,
Tangier, Ind.

TO THE EDITOR:

The other evening my husband remarked, "There's an article in the March Scholastic Coach that surely fits you, mother." Imagine my surprise and delight after reading the column on the coach's wife! I fairly walked on air. Why? Because I have always tried to be that ideal coadjutor to Mr. Coach. I wanted to aid him through every season, through every victory or defeat; be that perfect companion.

Five short years I've carried on my role, patiently and earnestly to the best of my ability — and no greater compliment could he have given me than to refer me as he did to "Mrs. Tony's" column. I'd like to suggest "Helping Hand" as a title for the column, because after all that title does denote most perfectly what we strive to do.

MRS. ART OLSON,
Royal, Iowa.

TO THE EDITOR:

The letter and comments by Mrs. Matulis in your March issue were very interesting and I am in favor of her suggestion. It has always been my habit to snoop through my husband's coaching and sports literature, furtively reading fascinating articles. But to be able to flauntingly read a column written exclusively for me is really something to look forward to.

My suggestion for a column heading is "Mrs. Coach Speaks" or just "Mrs. Coach" since every coach's wife seems to acquire this moniker sooner or later.

MRS. BYRON W. TODD,
Syracuse, N. Y.

TO THE EDITOR:

I would like to submit a title for the column to be written by a coach's wife. It is "Wit and Wisdom for the Coach's Better Half."

W. F. GLAVIN,
Warner, N. H.

Here Below

THE toast of the sports-loving British back in 1804 was a Captain Barclay. The good Captain had run a mile in 4:50 flat, an accomplishment so startling that Britishers were dazed into forgetfulness of an erstwhile corporal with whom the British army (with the apparent exception of Captain Barclay) was about to lock horns.

Since then such milers as John Paul Jones, Abel Kiviat, Joie Ray and Paavo Nurmi have steadily been making inroads on that historic 4:50, and up to the present more than 45 seconds have been clipped from Barclay's record. Reigning miler of the day is Glenn Cunningham. At 28 years of age, four years out of college and with seven years of top-flight competition behind him, Cunningham is running as no miler has run before. He is an automaton geared to speed that not one in the world can approach for consistent effort.

During the recent indoor track season, the Kansan was victorious in 13 consecutive mile races. How he managed to keep at peak condition from week to week was amazing, for no care-free college athlete is Cunningham. Married and father of a $400 income tax exemption (it's a girl!) Glenn has many responsibilities. He works for a Wall Street brokerage in New York and is also engaged in writing his Ph.D. thesis in New York University's Graduate School of Education.

Somehow he manages to squeeze in his running practice about four times a week. He carries a portable stepladder with him in his training jaunts to the N. Y. U. track, asking the college boys to run up and down the steps while he takes their pulses and other measurements for his thesis.

He says he is not record crazy. "Records are all right," Glenn will tell you, "but the trouble is they don't last." This sounds like an echo of one of the great Paavo Nurmi's speeches way back in 1924 after he had just set the mile record at 4:10.4 on the red-clay Stockholm track. The experts at the time brashly predicted that the Finn's mark would stand for 20 years. But Nurmi himself knew better.

Nurmi, when interviewed by American newspapermen, declared that faster men in the future would beat his mark repeatedly when they became able to spread their effort over the route, and that a "4:04.4 mile is probable and I do not regard a four-minute mile as beyond human capacity."

Stunning though these words were to post-war critics, time has proven Nurmi a prophet of no mean ability. During the last decade, Paavo's record was lowered in swift succession by Jules Ladoumigue, a French poilu, 4:09.2; Jack Lovelock, a wiry little New Zealander, 4:07.6; and then by Cunningham with a 4:06.7. Here, thought the experts, is a mark which will stand up for a while. But along came a skinny, bespectacled London bank clerk, Sydney Woodersen, and chipped what was then computed as a tenth of a second off Cunningham's mark.

But in the latest group of world's records accepted by the International Amateur Athletic Federation on February 28, Woodersen's 4:06.6 suddenly turned out to be 4:06.4. With characteristic reticence, British Amateur Athletic Association officials "didn't want to be forward about it "when two watches caught Woodersen in 4:06.4 and another in 4:06.6, so they announced the time after the race as 4:06.6.

Only three days after the I.A.A.F. released the new world records, Glenn Cunningham astonished the track world by spinning around six and two-thirds laps of the springy Dartmouth College indoor track in 4:04.4—the actual time, down to the fraction of a second, that Nurmi in 1924 predicted would some day be run! Although Cunningham's mark will never be accepted by the I.A.A.F. as a world record since his mile was run indoors, the time represents the closest approach yet to the magical four-minute mile.

In a bit of non-scheduled pre-season training, Mickey Owen of the St. Louis Gashouse Gang and Mel Almada of Washington let off steam usually reserved for the late season drive.

WELL, the Olympic wars have started. The year at hand is only 1938, but it is not too early to begin throwing the verbal bull in preparation for those contests of international goodwill and friendship held every four years, Mars being willing.

It seems the Games will be held in Tokyo in 1940 after all. The Lord High Olympic Committee, with our Mr. Avery Brundage (remember him?) on hand to represent the U.S.A., met last month and deemed it wise and proper to go ahead with the Games in Japan, despite hell and high water.

The Committee changed the dates of the Games from August 25 to September 21. The change was made in order to escape some of the oppressive heat to which Japan is normally subjected in August and early September. Suspicious Americans see this latest move as a deliberate coup by the I.O.C. to

(Concluded on page 40)

DESIGNING THE NEW HIGH SCHOOL DISCUS

By Tuttle, Bresnahan and Canine

A special discus which the high school thrower can handle with the same degree of efficiency as the college athlete

At the suggestion of E. A. Thomas (representative of the National Federation of State High School Athletic Associations on the N.C.A.A. Track and Field Rules Committee), Dr. W. W. Tuttle, associate professor of physiology at the University of Iowa, George T. Bresnahan, track coach at the same university, and Henry Canine of Aledo, Ill., High School designed a special discus for the high school competitor. The authors have been informed that this new discus, which was designated "approved" in the 1938 Track and Field Guide, will become official in 1939. In the article, they discuss the methods and data employed in their experiment, and how they arrived at the measurements and weight of the new implement.

A FAVORITE sport of the ancient Greeks, discus throwing was introduced as an event in modern athletics at the revived Olympic Games first held at Athens in 1896. In the days of Homer, the thrower stood upon a pedestal and hurled the discus with a single twist of the body, leaving the pedestal at the instant he made the throw. The ancient procedure was discarded in 1896 when the so-called free style was introduced which permitted the thrower to perform from a circle on the ground.

With the development of physical aids and proper form, the discus fitted well into the college and high school track and field program. Up to the present, interest in it as a college event has been sustained but as a high school event enthusiasm is waning. And since this event demands a high degree of skill and coordination, it seems a pity to let it decline in high school competition. Also, from the standpoint of the college coach, the retention of the discus event in the high school program is particularly desirable since the prospective college candidate is furnished with an opportunity to serve an apprenticeship.

The chief criticism of the discus throw in high schools is that the collegiate discus is not adapted to the average high school boy, and that no suitable implement has been devised which he can handle with the same degree of efficiency and accuracy as enjoyed by the college athlete.

It occurred to us that through a scientific investigation of the discus problem, it was entirely possible to construct an implement which the high school athlete could throw with the same degree of satisfaction that the college man throws the collegiate discus.

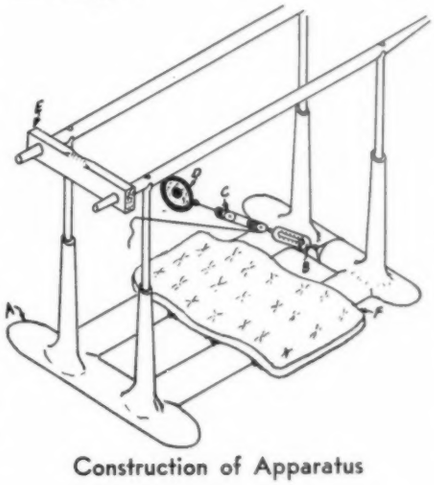
As a starting point, it was assumed that the collegiate discus is suitable for the college athlete. As far as we know, no one questions this premise. The objective, then, was to adjust the discus in size and weight in proportion to the size and the strength of college men and high school boys.

Experimental procedure

The experimental procedure consisted of collecting data from a group of 70 high school discus throwers and 70 college discus throwers relative to their comparative strength and size.

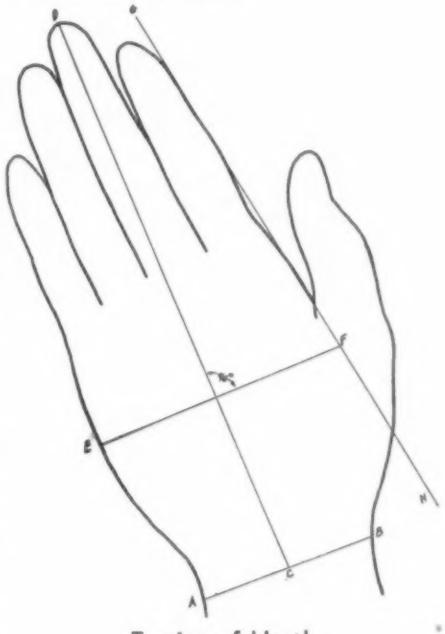
A strength index was determined for each athlete which included the sum of the individual's leg strength, back strength, right and left grip strength, chest-pull strength and finger-pull strength. The dynomometer was used for measuring strength in each case, except that of the fingers.

Finger strength was defined as the breaking force at the first joint of the second, third, fourth, and fifth digits. The apparatus employed for measuring finger strength was arranged as follows: A flat-faced spring scale was tied to the base of parallel bars (common gymnasium apparatus). A discus was fastened to the scale by means of a block and tackle. Finally, a board was slipped over the ends of the bars, adjusted to the height of the axilla of the subject.



Construction of Apparatus

The athlete stood with his throwing arm over the board and grasped the discus, palm down, with the first joint of the second, third, fourth, and fifth digits. The other joints of the fingers were flat on the implement. One experimenter kept the discus from falling from the athlete's hand by lightly holding the rim against the subject's wrist, by pressure from the thumb and forefinger. The other experimenter then pulled the rope of the block and tackle until the discus was broken from the subject's grasp. The indicator of the scale remained at its highest point, and the pull was registered in pounds.



Tracing of Hand

A size index was determined from hand measurements taken from tracings of the throwing hand. These were made by placing the hand and forearm on a table with the hand and forearm in a straight line. The styloid processes of the forearm were marked, and the outline of the subject's hand was traced on the back of his record sheet. (See illustration.) Care was taken to keep the pencil perpendicular to the tracing surface at all times. The length of the hand was taken as the distance from the mid-point of a line joining the styloid processes of the forearm to the tip of the middle finger (C-D).

In measuring width, a line of best fit was drawn along the first metacarpal bone as a point of origin (G-H). The width was then taken as the greatest distance between the second and fifth metacarpal bones in a straight line perpendicular to the line measuring the length of the hand (E-F). These measurements were taken in centimeters and then changed to inches after the averages were computed.

The college group from which data were collected consisted of 16 seniors,

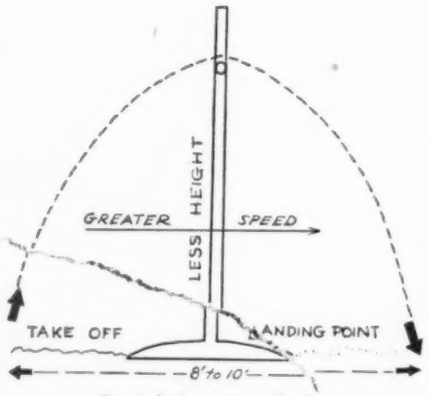
(Continued on page 39)

High Jump by Threadgill

By Ben Ogden, Track Coach, Temple University

AL THREADGILL of Temple University, whom I believe to be the greatest jumper for his size in the country, is only five feet nine inches tall and yet has jumped 6 ft. 7¾ in. or ten and three quarters inches over his own head. The form and technique he uses in reaching such unusual heights for a jumper so relatively small, are graphically illustrated in the accompanying pictures which show him clearing the bar at 6 ft. 5 in. at the University of Pennsylvania annual relays last spring—the leap with which he won the event.

In order to really appreciate his style, however, the following explanation is necessary. After approaching the bar in stride, many high jumpers usually cover a distance of at least eight to ten feet from the point of leaving the ground until the jump is completed. This semi-broad jump is a distinct waste to exceptionally tall or short men. It becomes necessary then to evolve a technique which will eliminate such waste, although the jumping technique of the tall man who has a great natural stretch and leg length need not be so fine or efficient.



Broad Jumping Style

With a long take-off and a semi-broad jump, the athlete is projecting himself forward rather than upward—losing precious height.

With men of Threadgill's height, it is imperative that every factor, even though only remotely concerned with projecting the body upward, must be seriously studied, analyzed and where possible—utilized.

Threadgill's take-off

Consequently, Threadgill's take-off point was figured as close to the bar as possible, about twenty-six inches, and the landing point approximately three to three and a half feet away. By cutting down the broad jumping, we estimated that we could add a bit of the distance saved to the height.

However, in narrowing the base of the jump the peak consequently is narrowed, with the result that the jumper has less time for his body to travel through that space. For this reason, it was necessary to present the depth axis of the jumper's body to the bar instead of the breadth axis. To assist this movement or turn of the body at the height of the peak of the jump, it is vital that the jumper turn the upper trunk as quickly as possible, and there is nothing that will aid this motion more than a rapid arm swing. Threadgill's right arm is swung forcibly downward and the left arm swung upward which aids in twisting the trunk and through this the hips.

The timing in all of this action must be extremely fast and accurate. The one main weakness in this technique is that the left foot in following across the bar may be late. Whenever Threadgill misses a jump, it is usually the left foot which knocks the bar off and not his body.

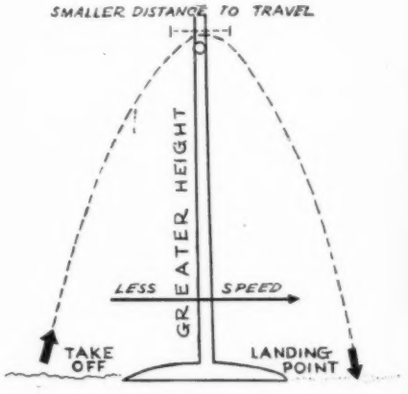
Addressing the bar

In addressing the bar, the body comes almost to a stop with complete concentration on the effort to jump directly upward and off the right foot. Let us follow the pictures. From a stand, Threadgill takes seven steps, the first four are small steps and used mostly for timing; the latter three are adjusting steps for distance, but so accurate has he become that he can be blindfolded and do 5 ft. 6 in., clearing the bar at that height by a good six inches. The distance from the bar and the angle of his approach are measured with a steel tape, using the right hand standard as a focal point.

In the first five pictures we see the approach. In picture 6, Threadgill starts the actual spring upward. The body is not inclined forward and the center of gravity is directly above the right or take-off foot. The left leg is starting its diagonal swing upward. In executing the forward leg swing, Threadgill performs this part with the knee slightly bent; another school of jumpers use a straight knee action. Through experience the athlete can determine the degree of knee bend which is most effective for him. As the left leg is swinging forward, the right arm is synchronized with it and is thrown vigorously forward and upward, aiding in both the maintenance of balance and in the lift.

In pictures 7 through 10, the body is getting into position to take advantage of the roll at the peak of the jump. The depth axis of the body has been presented to the bar in 11 and 12 and the layout is virtually level. The right leg is almost parallel to the bar and the left leg, bent at the knee, is at right angles to the opposite leg.

In 12 and 13 we see the complete advantage of the arm swing in turning the trunk. However, the main weakness of this type of jump is also shown in 13. If the left leg drags or does not move fast enough across the peak, it may easily knock off the bar.



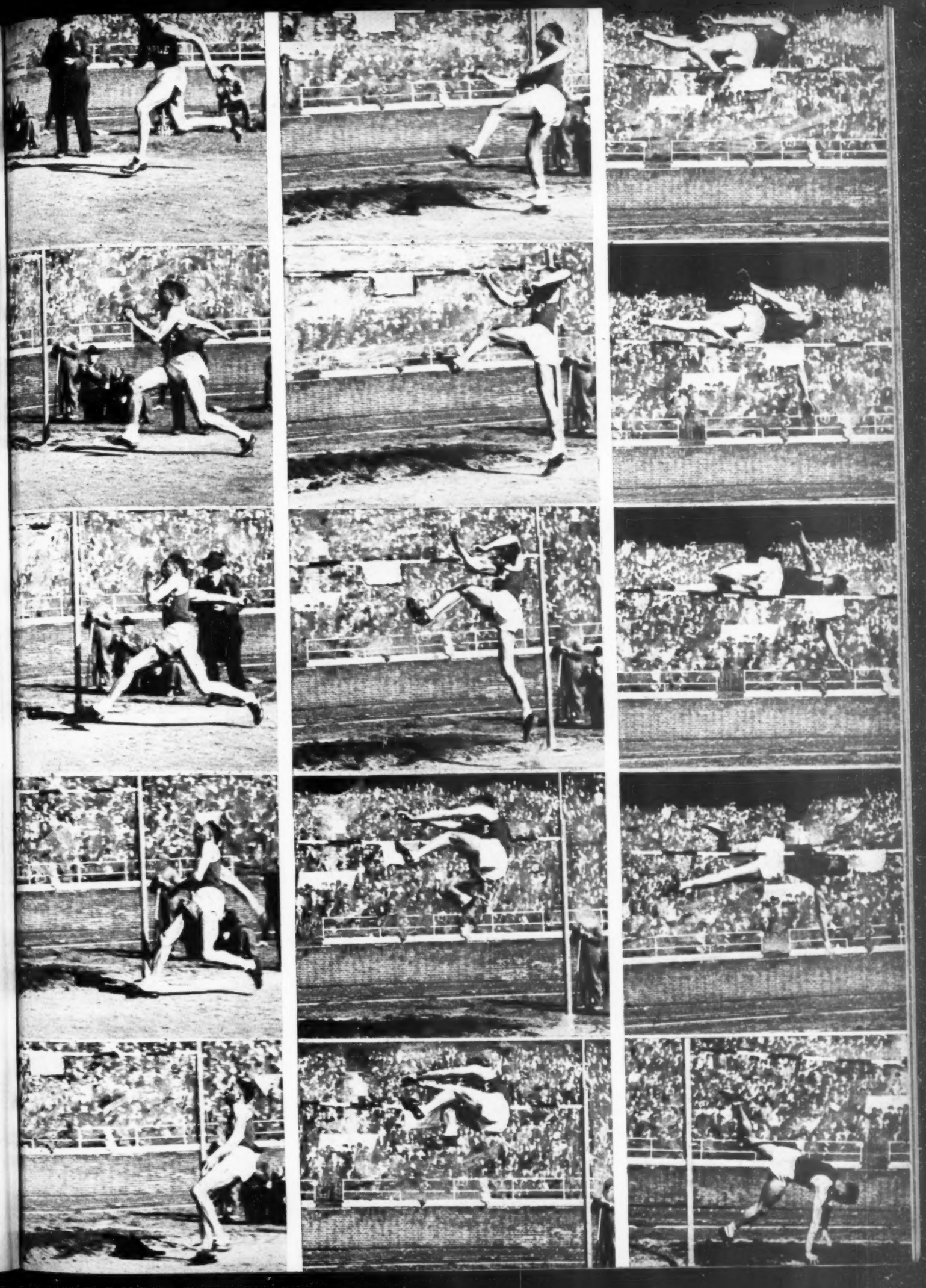
Shorter Base

Here both the take-off and the landing points are closer to the bar. The distance saved from broad jumping has gone into high jumping.

In the next to the last picture, Threadgill has completely cleared the bar and is well on his way down. His body is turning to the left and he will land on the right foot, the hands first maintain balance and then break the force of the fall (when the jumper drops into the pit). He lands on the same foot he took off from.

In the last picture, we can see how close he really is to the bar; the right hand is only about two feet away from the bar and the landing leg almost as close. This means that the total distance covered from the take-off to the ground was about five feet. Thus, it is reasonable to believe that of the average two to three feet that have been saved from *broad* jumping, some has gone into *high* jumping.

This style of jumping induces an economy of effort and waste motion.



BADMINTON—A CO-RECREATIONAL SPORT

By Carl Jackson and Lester Swan

Possessing speed, competitive appeal and requiring little space, badminton is an ideal game for both boys and girls

This is the first of a series of articles by Carl H. Jackson and Lester A. Swan of the Northern Evening High School (for adults) in Detroit, Mich. The authors have had five years of experience in teaching the game in the Detroit evening schools for adults and in summer camps for children; and have given practical demonstrations to college, club and other groups. The authors have just finished a book on the sport which will be published shortly.

BADMINTON presents an interesting case of "arrested development." Introduced in New York in the '70's by two gentlemen, one returning from England and the other from India*, it remained a relatively obscure game in this country until its renaissance in recent years. Since this revival of interest, its growth has been rapid.

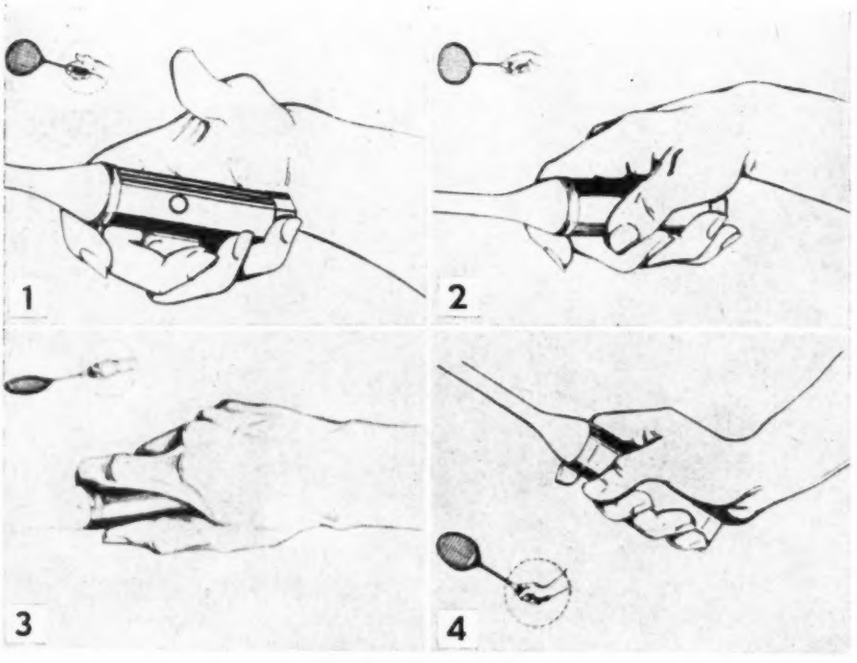
The first impetus came with the return of the soldiers from the World War. Many officers, Canadian and American, became acquainted with the game in England where it was already well established, particularly in army circles. More recently, the depression added further stimulus. Seeking new outlets for enforced leisure, many turned to badminton, for which they found the school gyms well suited.

In some respects, badminton is unique as a sport. It has speed, demand on physical reserve and competitive appeal, but its wide adaptability makes it well suited to all degrees of skill, to all ages and to both sexes. It is an ideal co-recreational sport which boys and girls may play with and against each other.

While badminton is played mostly indoors, it can be and is being played out of doors. As a corollary of this, it is an ideal carry-over sport. From these and certain other features, such as safety and economy of space, it follows that the game fits admirably into the school physical education program.

One possible drawback to the game as far as schools are concerned, is the factor of bird costs. The principal upkeep cost of the game results from the mortality rate of the shuttles, or birds. If maltreated or mis-hit, a shuttle may last only one game but ordinarily it should last for several. For the beginner practice shuttles may be purchased cheaply and used until the player has served his apprenticeship.

*See *Canadian Lawn Tennis and Badminton*, Nov. 1937.



Figures 1 to 4

Literature on the technique of badminton is scanty. Most of it has been written in England by the champions, and while interesting and useful to the advanced player, it is hardly suited to school needs. It is hoped that what follows is a step toward meeting this deficiency.

The grip

The first and basic fundamental to consider in badminton is the grip and racquet position, upon which the stroking depends. The most effective badminton stroke is a "flick" or wrist snap. The wrist, therefore, should be flexible; it will not be so unless the racquet is correctly gripped and held in proper relation to the arm. The accompanying series of illustrations demonstrate a simple method of teaching this grip and racquet position.

The anchor finger (Fig. 1). The racquet is being held out in front of the body and pointed down. The flat face of the racquet is on the same plane as the palm of the hand. The little finger is wrapped around the extreme end of the handle.

The thumb and index finger (Fig. 2). The racquet is in the same position as in Fig. 1. The thumb has been placed on the circle and the fingers wrapped around the handle. Note that the fingers are not crowded and the thumb and index finger are slightly forward on the handle.

Open wedge or large V (Fig. 3). The racquet is still pointing down but the face is turned at right angles to the floor. Note the open wedge or large V formed by the thumb and index finger.

Holding the racquet (Fig. 4). (Side view of the grip and method of holding the racquet.) The arm has been lifted up into stroking position, while the face of the racquet remains at right angles to the floor. Fingers and thumb remain as in Fig. 3. Note the tilt to the racquet and the wrist position. This is the "*flexible or unlocked* wrist."

Common faults

Rapid development in the game depends on an early recognition and correction of faults. It is fortunate for the badminton coach that most of the faults in any department of the game can be grouped into a few types, thus making easy their recognition and suggestion for correction. A summary of faults is perhaps of more real value for active coaching than a mere description of an ideal pattern, since any imitation of such a pattern is likely to take on some of the misunderstandings and inaccuracies of individuality. Needless to say, these inaccuracies will be the harder to correct the longer they remain unrecognized. The faults that follow are common ones.

The player may err in placing the thumb on the top faucet of the handle instead of on the side faucet (i.e. the circle). As a result, the fingers are out of position also, and make for an insecure grip. If the index finger is placed too far forward on the handle, movement of the wrist is restricted.

In **Fig. 5** the racquet is faced to the

player with the handle parallel to the floor. The face is parallel rather than at right angles to the floor. The grip is too tight, the thumb and index finger are out of position and the racquet is cocked up too high. This is a bad combination of errors, but it is not rare with beginners.

When the player humps or locks his wrist, there is no tilt to the racquet and the handle is on a line with the forearm instead of being raised slightly upward. Beginners often raise the arm at the elbow in adjusting the racquet for contact with the bird, leaving the wrist locked.

The choked grip is another type of fault. The thumb and index finger are out of position and the fingers are crowded. Furthermore, the grip usually is too tight and too far up on the handle.

Singles and doubles service

Unlike the server in tennis, the server in badminton is on the defensive. The rules committee considers the serve as a means of putting the bird into play rather than as an offensive measure. Hence the rule: "It is a fault if the service is overhand," i.e., if the bird is struck above the waist of the server. This is, of course, as it should be since the distance involved is so short that an "overhand" service would be entirely too offensive.

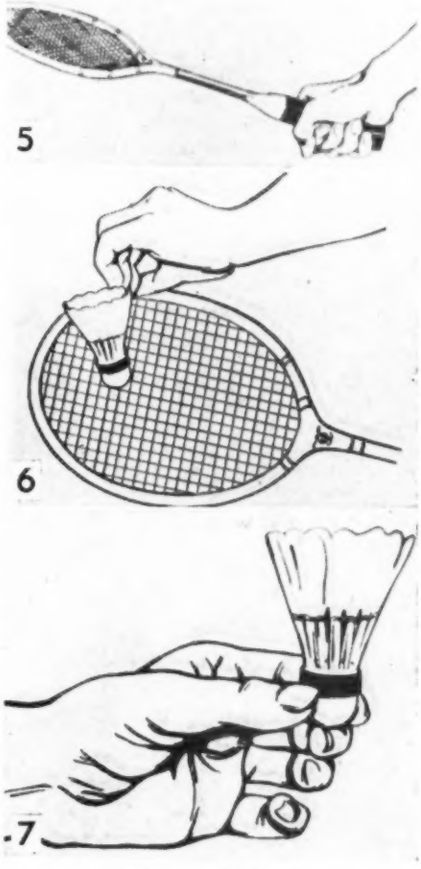
But the low service places the server in a "bad spot" if it is not executed accurately, as there are no rules as to the severity of a return. For this reason, the technique of the service is the next important coaching step after the grip.

There are four types of service: (1) The simple service, (2) the short or doubles service, (3) the high singles service (a long serve), and (4) the driven singles service (also a long serve). For lack of space, we shall not give detailed consideration to the driven service.

The simple service may be used for both singles and doubles and it is recommended that this be the first service taught. The short service is a refinement of the simple service, differing only in the fact that the court positions for the stance are more precise and the bird is directed to a specific spot in the receiving court. It may be used in singles, with some modifications in the court positions, and is termed a "doubles" service only because it is more effective, and hence mostly used, in the doubles game. The same may be said of the so-called "singles" services. Their alternate use in the one type of game (singles or doubles) is simply for the purpose of catching the receiver off-guard.

The simple and short services are most successfully executed with what may be termed an "out-of-the-hand" service, i.e., the bird is struck from the hand instead of being dropped or tossed. In the singles (high and driven) services, the bird must be tossed in order to get the requisite power of stroke and distance of flight. Since the toss involves the added complications of timing, instruction in the singles service should be postponed until the player is fairly proficient in other departments of the game. In any event, he will probably find more use for the doubles service since this type of game is more frequently played.

Accuracy—in upward angle of flight, direction of flight, and gauging of stroke—is the prime requisite for the short service. Height and distance of flight (hence strength of stroke) are the requisites of the high service. Accuracy of service is stressed in the first case because a sharp, upward flight, or a bird crossing more than two or three inches above the net-tape is open to a "net rush" and



Figures 5 to 7

"smash" return. Distance and height are stressed in the high singles service because they give the server the necessary time to "get set" for the return, and force the receiver to the backcourt, thus tending to draw him out of position for the server's return. As already suggested, the high service is used in doubles only to take advantage of the receiver's position.

Holding the bird

The method of holding the bird should of course vary with the type of service used. The short and simple services require accuracy. This is more easily attained by an out-of-the-hand service since it does not involve any of the timing complications of the toss service. In the high service, deception (such as a delay in hitting the bird to catch the receiver off-guard) as well as distance and height are sought. For the toss necessary in this type of service, the method of holding the bird that follows is the most satisfactory. The reasons for this will become apparent from what follows.

The "out-of-the-hand" service (Fig. 6). The bird is held by the tip of one feather, with the tip of the index finger and thumb. It is actually hit out of the hand, by the face of the racquet.

The toss service (Fig. 7). In the singles or long services, the toss must be accurate and well out in front of the body. The bird is held by the cork, with the ends of the forefingers and thumb.

Faults in holding bird

Faulty serves are very often caused by the manner in which the bird is held. In either type of service, it may result in missing the bird entirely. In the out-of-the-hand service, the fingers may be hit, or a mental hazard created which interferes with the service stroke. In the toss service, it may mean poor timing or direction.

A common fault in the simple or short services of beginners is the extension of the finger down the feather shaft. When held this way, the bird is either dropped or tossed inaccurately. Fear of hitting the fingers may create a mental hazard as well, with a consequent pulling-in of the service stroke.

Another tendency of the un-instructed beginner in the short (out-of-the-hand) service is the extension of the thumb down the feather shaft, with the same bad results. These errors may also result from pointing the bird into the racquet, a fault that seems to be associated with the mistaken notion that the bird must be hit on the end of the cork.

Holding the glued part instead of the cork is a common fault in the toss service. The glued part of the bird is apt to be sticky and the toss consequently inaccurate.

Beginning the service

To summarize, the objectives in the service are: (1) To force the receiver to make the weakest possible return, (offensive, so far as the service permits), and (2) to place oneself in readiness for the receiver's return, (defensive). We shall now consider how these objectives may best be obtained by: (1) Court position, (2) Placement points (placing the bird out of easy reach), (3) Stance, and (4) Stroke.

It should be mentioned at the outset that opinion among the experts varies on some of these points, which is no surprise to the coach. For example, in the high singles (toss) service one school of experts make this service from a left-foot-forward stance. Among other experts, however, the right-foot-forward stance is more

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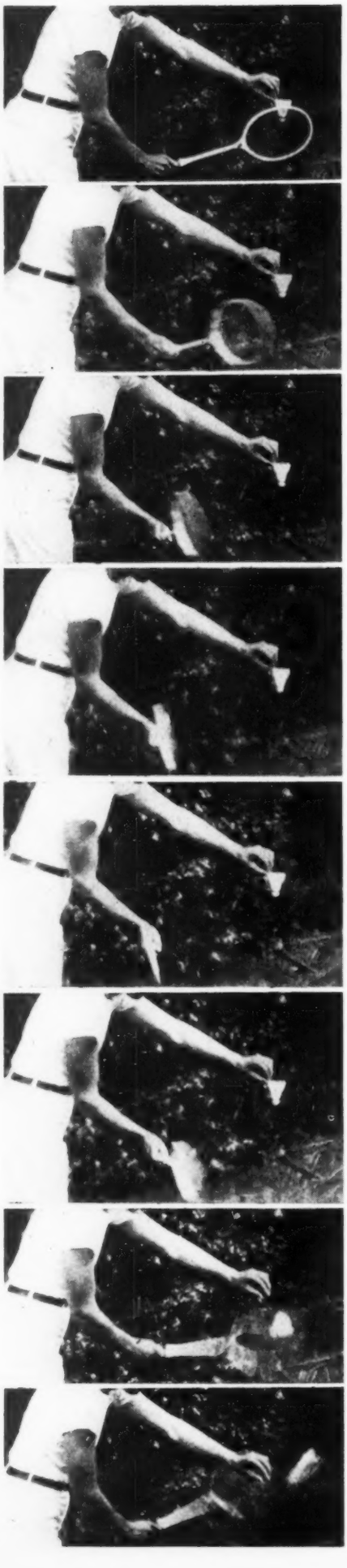

Left: Out-of-Hand Serve

The wrist does most of the work in this short service as the bird is tapped lightly out of the hand. The arm follows through after contact.

generally used. The choice between the two stances in the long singles service is largely a matter of personal preference.

In practice, among the experts, the stance for the short service may also vary slightly from those previously mentioned. There are also some slight variations in court positions, for strategic or individual reasons. This does not, however, invalidate the fundamental principles which we are attempting to lay down for the beginner. For him, these principles must of course be somewhat narrower and more definite than for the advanced player.

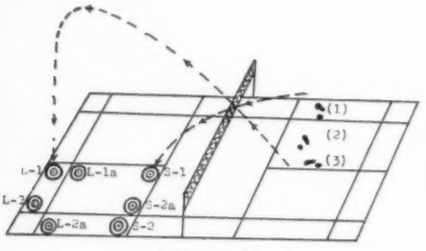

Figure 8

Right Court Service Positions: Points 1 and 2 are for doubles and 3 is for singles. Placement Points: S-1 and S-2 are for the doubles short service and L-1a and L-2a for the doubles long service. Points L-1 and L-2 are for the singles long service and S-1 and S-2a for the singles short service.

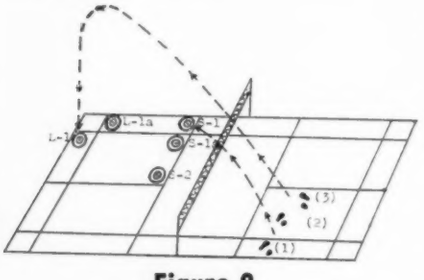

Figure 9

Left Court Service Positions: Points 1 and 2 are for doubles and 3 is for singles. Placement Points: S-1 and S-2 are for the doubles short service and L-1a for the doubles long service. Point L-1 is for the singles long service and S-1a and S-2 for the singles short service.

Court positions for the singles and doubles services **(Figs. 8 and 9)** will differ for both offensive and defensive reasons. In doubles, service is made from the footprinted court-spots marked (1) and (2). Spot (1) is selected when a wide cross-net angle of flight is desired, for defensive safety. This is the usual spot for a doubles short service and should be exactly a racquet's length back of the short service line, between the two alley lines. It is recommended that the beginner measure this distance at first. This will establish such factors as upward angle and distance of flight, as well as gauging of stroke, as fixed habits. A *racquet's length* is stressed because the desired upward angle of flight is most easily attained from this distance.

The spot marked (2), midway between the alley and midcourt line and a racquet's length from the short service line, is another doubles service position; this spot is usually selected by the server in mixed doubles because it enables him to cover a larger court area for the return. The footprints marked (3) show the singles service position, which should always be as close to the midcourt line as possible and a little farther back from the short service line than the doubles service positions; this distance should be a racquet's length plus about 18 inches. This position is of course necessary because the server is responsible for the entire court area.

Placement Points

The server should aim his services at certain points on the receiver's court. In both the right and left court diagrams, first choice for the short service placement is labeled S-1 and S-1a. (The point S-1a is of course the outside corner of the singles receiving court while S-1 is the outside corner of the doubles court.) This placement, from the outside alley line position, gives a sharp cross-net flight which is more deceptive to the eye than the straight-on flight.

But perhaps more important is the fact that these placement points are to the receiver's backhand. The placement points in the high singles service (L-1 and L-1a) are also selected so as to direct the play to the receiver's backhand. However, in the right half-court, two other placement points are very effective—the outside corner labeled L-2 and L-2a. Serving to this corner of course tends to force the receiver out of position for the server's return. Variations from one to the other of the placement points shown, or even to other points, should be made to catch the receiver off-guard.

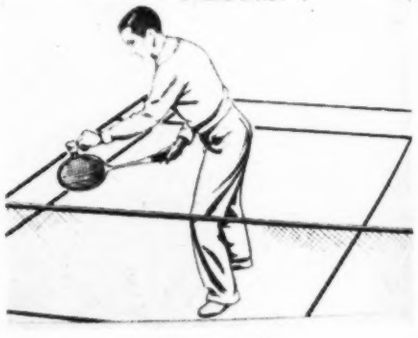

Figure 10

Fig. 10 illustrates the left-foot-forward stance for the short service. The body is faced toward the sidelines and the hips are in line with the proposed line of flight. Note that the body is bent forward, the knees flexed, the arms extended well out in front of the body to permit freedom in the racquet swing, and the racquet and bird are measured preparatory to the backswing of the racquet. This stance is similar to that of the forehand stroke and is strongly recommended as the choice in teaching the beginner.

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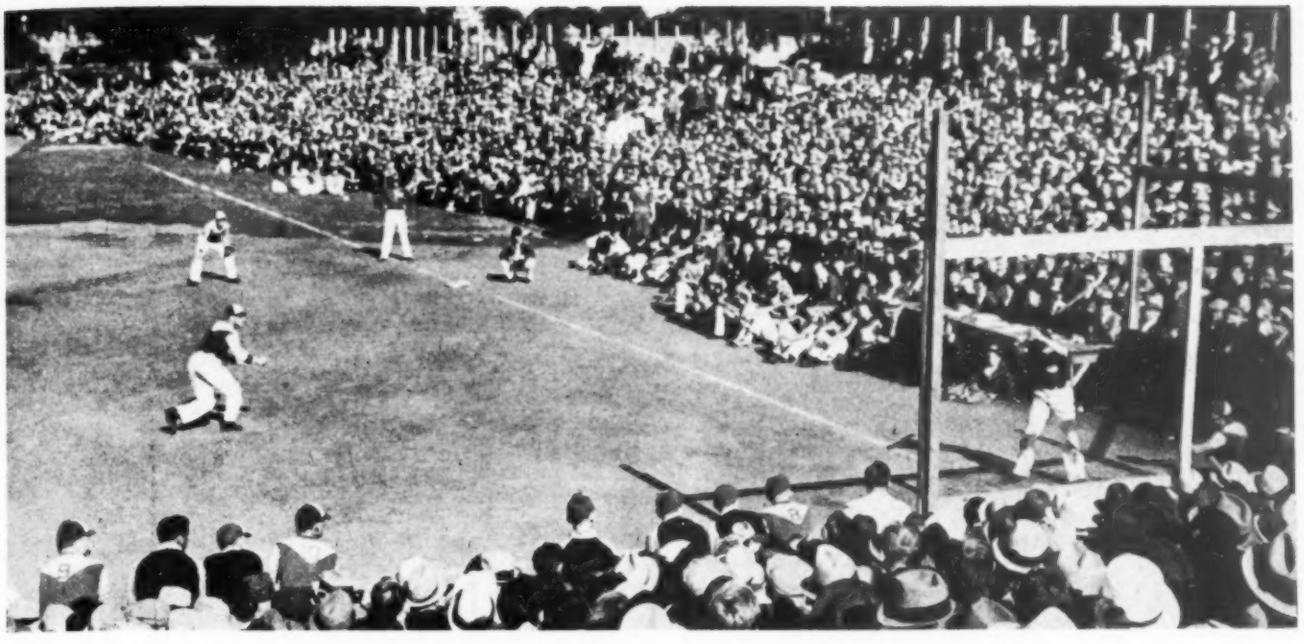


SOFTBALL UNDER THE NEW RULES

By Hubert G. Johnson

Hubert G. Johnson, supervisor of athletics of the Department of Recreation in Detroit, Mich., is rules interpreter of the Joint Rules Committee on Softball, consisting of sixteen men from all sections of the country.

DEMAND for an outdoor small-area game by a baseball minded public gave origin to the adaptation of indoor baseball to outdoor play. A ball, bat and diamond somewhere between regulation baseball and indoor baseball seemed to be the answer, but individual groups in working out this compromise operated separately according to their own ideas which resulted in a number of games varying in equipment, rules and even names.

As the outdoor adaption of indoor baseball caught hold rapidly and became a popular national and intercity sport, an acute need developed for a central rules-making body to coordinate the various sets of rules into one code. The Joint Rules Committee on Softball, representing national organizations which have been interested for years in the promotion and development of softball, was the answer.

Realizing that most people have a general knowledge of baseball, the Committee's first step, therefore, in harmonizing the rules was to lift bodily from the baseball code each rule and section which could be applied in the modified game. The smaller diamond made it necessary to use a different style of pitching and to curtail the privileges of the base-runners.

The need for a ball which would hold its firmness longer gradually brought about the smaller and much more solid ball now in general use. With the increased carrying power of the ball came a resultant increase in the size of the diamond and changes in the style of play. Use of the bunt, against which on the smaller diamond there was no adequate defense, constituted the major change for 1938.*

Softball and baseball now differ only in the pitching and base-running. The softball pitcher should be a pitcher in the true sense of the word, just as he was originally in baseball. Evolution in the baseball type of delivery with the development of the overhand, cross-fire and "submarine" or underhand throws makes the word pitcher in baseball mean only the position occupied by that player.

Much of the confusion about softball pitching would be avoided if it could be impressed upon the player that a softball pitcher pitches in the sense that horseshoes are pitched.

A softball pitcher is in no sense to throw the ball in making his delivery. A study of the softball pitching rule will show that it is designed to prevent the underhand *throw*. Equal emphasis on batting and pitching would have avoided much of the advantage apparently held by the pitchers. Over-emphasis on pitching and not enough attention to batting has caused the batter to appear in a defensive rather than an offensive position. Pitching two-thirds the distance of baseball, the softball pitcher has developed a speed almost, if not, as great. Many times he catches the batter wholly unprepared; this is especially true if a pitcher has a nice change of pace.

Batters should be coached to take as few preliminary swings as possible and to always have the bat back and ready to swing with the pitcher's delivery. A batter who holds his bat forward and attempts his back swing while the pitcher is in motion, will many times find himself striking at the pitch about the time it reaches the catcher.

Bunting will materially reduce the advantage of the pitcher and be a distinct aid to the base-runners. The "squeeze" play may now be employed and the shorter distance for the runner is offset by the fact that the runner cannot leave his base until the ball leaves the hand of the pitcher.

Bunting should also change the position of the tenth player. Known as the short fielder and formerly a roving player in the area between the infield and outfield, this player may now play occasionally inside the diamond, especially when there are runners in scoring position.

The illegal pitch

The illegal pitch, called a "balk" in baseball, was in the first place a device to trap a runner off base. With the development of freak pitches to deceive the batsman and methods of intentionally giving a base on balls, the meaning of these expressions was broadened to include all methods employed by pitchers and catchers to use

(Continued on page 29)

* For complete softball rules changes for 1938 and an explanation of the pitching rule, see "Softball Rules Changes," by Arthur T. Noren in the January, 1938, Scholastic Coach.

PLANNING AN INTRAMURAL TRACK PROGRAM

By Francis D. Sell

Events to include should be based on needs of school; for best results spread meet over a three-day period

As an undergraduate at State Teachers College in Bloomsburg, Pa., Francis D. Sell was captain of both the cross-country and track teams, climaxing his career by smashing the teachers college half-mile record for the state —a mark that still stands. Now coaching track at the Boyertown, Pa., High School, he describes the intramural program which he has installed.

WITH the exception of the relays, the emphasis in track is almost entirely on individual effort. The boy or girl running a race or competing in any field event is entirely on his or her own. There are no other players to help shoulder the burden when the going is tough. As a result we may safely assume that track is an excellent medium for young men and women to develop self-reliance and poise.

Perhaps the most effective way of introducing the sport to the student body and creating a source for future varsity material, is through an intramural program. Once the program is established, interest in track should never languish. So firmly has the intramural program taken root at Boyertown, that alumni return each year and ask to help with the officiating of the meets.

The rules we follow are few and simple. They are: (1) A student must pass a physical examination. (2) He may participate in any three events. (3) No student may participate in any meet until he has reported for fifteen practice sessions. (4) A group may enter three competitors in each event, unless notified to the contrary.

Planning the program

In planning the year's program, it is first necessary to divide the students into groups, perhaps by class or home room. The group scoring the most points might be awarded a cup which they may hold for one year. The cup purchased at a nominal cost adds a great deal of zest to the competition. Ribbons offered as awards to place winners are also well worth the price.

Do not under any circumstances hold the first meet until the boys are physically and mentally conditioned. At the same time don't make them wait too long for the initial meet or they may lose interest or go stale. Four or five weeks of practice should be sufficient.

For coaching purposes the boys are divided into special groups, and since it would be impossible for one man to direct the entire program the varsity track men can be pressed into service to help with the coaching. In this way benefit is derived by both the beginner and the boy who coaches. In all of his own practice work, the latter feels that he is being closely watched by his pupils with the result that he strives to do his best at all times

In the meantime the coach should be on the alert for the unexpected. A boy interested in putting the shot may have the potential qualities of a discus or javelin thrower, or a sprinter may develop into a broad or high jumper. For this reason we discourage them from selecting the events in which they want to compete until they have been through several practice sessions.

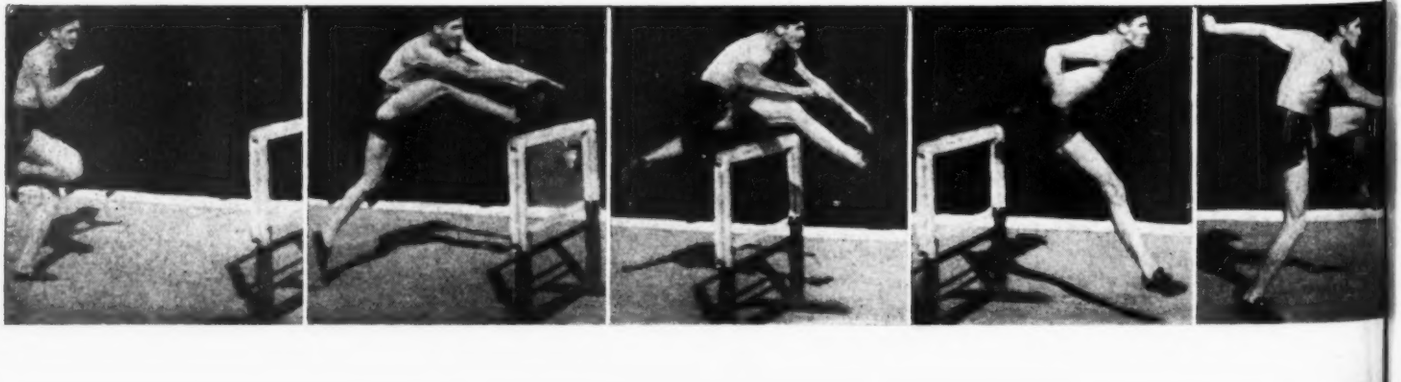
If you plan your program for just one meet, the writer suggests that the 10-11-12 grades constitute one division and 7-8-9 the other. At Boyertown, however, we arrange for two meets. In the first meet the groups are paired off as follows: 7 vs. 8, 9 vs. 10 and 11 vs. 12.

A comparison of the results of the first meet will determine entirely the arrangement that will be used in the second meet. It may be 8 vs. 9 with 7 eliminated, while 10, 11 and 12 would be competing against each other. If the scoring was very close in the 7 vs. 8 contest then those two would have another chance to compete since they were so evenly matched. And while they were facing each other, perhaps 9, 10, 11 and 12 may hook up in a meet. This would depend entirely upon the quality of their respective material.

The events to include in this intramural program should be based on the needs of your school. Select the events that are also a part of your interscholastic schedule. You may want to put some emphasis upon a few of the events. In that case allow more entries in those events. For example, in our section of the country the mile relay is very popular. But that doesn't mean we will stress the mile relay in our intramural program. Instead more emphasis is put on the 220- and 440-yard dashes. It makes for better competitive running. After a field of mile relay men have finished the first lap, the field may be so well scattered that a good 440 man may be unable to show his mettle.

All the events should never be crammed into one day. If the meet is spread over a three-day period, everyone who desires is given a chance to compete, interest is prolonged and all the heats can be run off without hurrying them. We have found it best to run the events immediately after school. In many instances it is possible to arrange the program so that a boy will be competing in only one of his events each day. This will make the competition no more strenuous than a practice session. No set program should be followed from year to year.

In the field events it is wise to give each competitor four trials and not hold any finals. If an athlete cannot make one good jump or throw in four trials, then he cannot possibly do it with more.



FORREST "SPEC" TOWNS: Olympic high-hurdling champion who has run his last race. Towns retired after the last indoor track season to become assistant track coach at the University of Georgia, his alma mater.

Outdoor Track and Field Records at a Glance Up to Date

	O NATIONAL INTERSCHOLASTIC RECORD	● NATIONAL INTERCOLLEGIATE RECORD	■ WORLD'S RECORD
100-YARD DASH	9.4s. Jesse Owens, East Tech, Cleveland, O., 1933	9.4s. Simpson, Ohio State, 1929 *(starting blocks)*; Meier, Iowa State, 1930 *(starting blocks)*; Wykoff, So. California, 1930; Metcalfe, Marquette, 1933; Owens, Ohio State, 1935, 1936	9.4s. Frank Wykoff, U.S.A., 1930; Jesse Owens, U.S.A., 1935
220-YARD DASH *(around one turn)*	21.4s. Eugene Goodwillie, Chicago Univ. H. S., 1923	NO INTERCOLLEGIATE RECORD AROUND A TURN	NO WORLD'S RECORD AROUND A TURN
220-YARD DASH *(straightaway)*	20.7s. Jesse Owens, East Tech., Cleveland, O., 1933	20.3s. Jesse Owens, Ohio State, 1935	20.3s. Jesse Owens, U.S.A., 1935
440-YARD RUN *(one complete lap)*	48.2s. Herbert Moxley, Central H. S. (Columbus, Ohio), 1928	46.5s. Archie Williams California, 1936	46.4s. Ben Eastman, U.S.A., 1932
440-YARD RUN *(straightaway)*	48.2s. Frank Sloman Polytechnic H. S. (San Francisco), 1915	NO INTERCOLLEGIATE RECORD ON STRAIGHTAWAY	NO WORLD'S RECORD ON STRAIGHTAWAY
880-YARD RUN	1m.54.4s. R. L. Bush, Sunset H. S., Dallas, Tex., 1933	1m.50.3s. John Woodruff Pittsburgh, 1937	1m.49.6s. Elroy Robinson, U.S.A., 1937
ONE-MILE RUN	4m.21.3s. Louis Zamperini Torrance H. S. (Calif.), 1934	4m.6.7s. Glenn Cunningham, Kansas, 1934	4m.6.4s. Sydney Woodersen, England, 1937 *See note below**
TWO-MILE RUN *See note below‡*	9m.51.4s. Allen Swede, Mercersburg Acad. (N. J.), 1918	9m.10.6s. Donald R. Lash Indiana, 1936	8m.56s. Miklos Szabo, Hungary, 1937
120-YARD HURDLES 3 ft. 6 in. hurdles *See note below†*	14.7s. Philip Cope, Classen H. S., Stillwater, Okla., 1933 *See note below†*	14s. Bob Osgood, Michigan, 1937	14s. Bob Osgood, U.S.A., 1937
220-YARD HURDLES 2 ft. 6 in. hurdles *(around one turn)*	24.4s. C. Cory, Chicago Univ. H. S., 1913; F. Loomis, Oregon H. S. (Minn.), 1916; D. Kimball, Deerfield-Shields H. S., 1920	NO INTERCOLLEGIATE RECORD AROUND A TURN	NO WORLD'S RECORD AROUND A TURN
220-YARD HURDLES 2 ft. 6 in. hurdles *(straightaway)*	23.5s. A. Oliver, Roosevelt H. S., Dayton, O., 1931	22.6s. Jesse Owens, Ohio State, 1935	22.6s. Jesse Owens, U.S.A., 1935
RUNNING HIGH JUMP	6ft.6in. Willis Ward, Northwestern H. S. (Detroit), 1931	6ft.9¾in. Melvin Walker Ohio State, 1937	6ft.9¾in. Cornelius Johnson, U.S.A., 1936; David Albritton, U.S.A., 1936 *See note below**
RUNNING BROAD JUMP	24ft.11¼in. Jesse Owens, East Tech, Cleveland, O., 1933	26ft.8¼in. Jesse Owens, Ohio State, 1935	26ft.8¼in. Jesse Owens, U.S.A., 1935
POLE VAULT	13ft.6½in. Bill Sefton, Polytechnic H. S. (Los Angeles), 1932	14ft.11in. Earle Meadows, Univ. So. Calif., 1937; Bill Sefton, Univ. So. Calif., 1937	14ft.11in. Earle Meadows, U.S.A., 1937; Bill Sefton, U.S.A., 1937
12-POUND SHOT PUT	58ft.10in. Elwyn Dees, Lorraine H. S. (Kansas), 1930	NO 12-LB. INTERCOLLEGIATE RECORD (16-lb.—Jack Torrance, La. State 55 ft. 1½ in., 1934)	NO. 12-LB. WORLD'S RECORD (16-lb.—Jack Torrance, U.S.A., 1934 57 ft. 1 in.)
DISCUS THROW	154ft.9in. Edsel Wibbels Wolbach, Neb., H. S., 1937	173ft. Kenneth Carpenter Univ. So. Calif., 1936	174ft.2½in. Willi Schroder, Germany, 1935
JAVELIN THROW	219ft. Robert Peoples Classen H. S., Okla. City, 1937	229ft.2¼in. Alton Terry Hardin-Simmons, 1937	253 ft.4½in. Matti Jarvinen, Finland, 1937
RELAY—440 YARDS	42.4s. Glendale H. S. (Calif.), 1928	40.6s. Univ. of Iowa, 1935	40.8s. Univ. Southern California, U.S.A., 1931
RELAY—880 YARDS	1m.28.2s. Polytechnic H. S., Los Angeles, 1931	1m.25s. Stanford, 1937	1m.25s. Stanford Univ., U.S.A., 1937
RELAY—ONE MILE	3m.21.4s. Hollywood H. S. (Calif.), 1929	3m.11.6s. Univ. So. Calif., 1936	3m.11.6s. Univ. Southern California, U.S.A., 1936
RELAY—TWO MILES	8m.9.3s. Deerfield-Shield H. S. Highland Park, Ill., 1931	7m.42s. Georgetown, 1925	7m.35.8s. (Hornbostel, Young, Williamson, Woodruff), U.S.A., 1937

O Approved by National Federation of State High School Athletic Associations.
● Approved by National Collegiate Athletic Association.
■ Approved by International Amateur Athletic Federation.

†The hurdle events for high schools were changed by the Track and Field Rules Committee, and appeared in the official program of events for the first time two years ago. These new events are the 120-yard race over hurdles 3 ft. 3 in. in height; and the low-hurdle race at 200 yards instead of 220 yards over the standard 2 ft. 2 in. low hurdle. Several notable high school performances in these new events follow: 14.5s by Lawrence of North H. S., Wichita, Kans., over the 3 ft. 3 in. high hurdles and 21.9s by McMurray of Sandusky, Ohio, H.S. over the 200-yd. low hurdles.

‡The two-mile run no longer appears in the official records as compiled for the Track and Field Guide by the National High School Federation Track and Field Committee, E. A. Thomas, Topeka, Kans., chairman and national representative. Moreover, this Committee no longer recognizes for high school classification records made in prep school and military academy competition. The Committee may, at some future date, set up a separate set of records for this group, as the Swimming Records Committee has done.

*In a more or less paced race, Glenn Cunningham ran a 4m. 4.4s. mile, the fastest in history, on March 3, 1938, on the Dartmouth College indoor board track in Hanover, N. H. While this record will undoubtedly be recognized as a world's record in American record books, there is no chance that it will be accepted by the I.A.A.F. as the international body does not recognize indoor marks.

*Last summer at Stockholm, Sweden, Melvin Walker of Ohio State high jumped 6 ft. 10 in. to better a mark of 6 ft. 9 29/32 in. which he had created earlier in the same week. Strangely, neither his two record-breaking attempts nor his accepted intercollegiate record which ties the world mark, were given consideration by the I.A.A.F.

EFFECTS OF THE CENTER JUMP ELIMINATION

By Fred V. Hein and Dr. A. J. Randall

Physiological study on ninth grade boys proves that the new game imposes additional strain on the players

Fred V. Hein and Dr. A. J. Randall of the department of health and physical education at the McKinley Junior High School in Kenosha, Wis., conducted this experiment on the physiological effects of the elimination of the center jump using two groups of ninth graders with an average age of approximately sixteen years.

THE elimination of the center jump in basketball and its effect on the players and the game, has been a subject of considerable controversy during the past several months. A great majority of the criticism in favor of or in opposition to the change was entirely subjective and based chiefly on the players' reactions and coaches' observations. In a good many instances we were probably guilty of rationalization along either line, depending on whether we favored the old or new regulations.

With the above in mind we decided to make actual tests under as near laboratory conditions as possible to determine the physiological effect on the player under both the old and new rules. We realized that emotional and mental measurements were practically impossible, but we believed that these reactions should be closely paralleled by physical reactions.

Testing methods

Both because of the availability, and because of the fact that ninth grade boys are the lowest strata which the competitive effects of the game ordinarily reach, this group was made the subject of our tests. However, the groups tested averaged nearly sixteen years of age, a figure which might apply to a good many players on high school teams.

The Wisconsin interscholastic code under the new rules with the center jump eliminated, allows five time-outs, has no ten-second limit for advancing the ball beyond the center line, and makes it imperative for officials to handle the ball after successful field goals and free throws, as in other out-of-bound-plays. This code was followed both for the old and new type of game in the testing program.

The limit of time-out periods according to the varying rules (three per team under the old rules and five per team under the new) were used, either on the players' own initiative, or were called arbitrarily by the officials.

Two squads of boys with ten in each group were given the tests. Each group, of course, was divided into two teams. One group played under the old rules in the first test and under the new rules in the second. The other group followed an opposite procedure. By this method we hoped to eliminate any cumulative effect of the exercise. The tests were spaced three days apart as an added precaution in this direction.

All players were tested both before and after each game for: (1) weight loss, (2) pulse change, (3) pulse recovery (2 minutes), (4) blood pressure change (systolic and diastolic), (5) blood pressure recovery (2 minutes).

The examination before the game presented only the problem of eliminating nervous reaction to the tests. This was accomplished by retesting in doubtful cases, by keeping the boys quiet previous to the contest and by explaining the nature of the tests to the groups. The testing after the contests presented a greater problem. To wait until the conclusion of the games and test all players in order was out of the question, since by the time the tenth boy could be reached all reaction would be lost. To solve this difficulty the players were numbered and examined in the same order during each game. At the conclusion of the third quarter player number one was removed from the game and his reactions checked. Upon one's return to the game, player number two was examined and so on until the entire group had been examined. An untested substitute took the place of the boy absent from the game. By having one examiner check weights, another pulse rate, and a third blood pressure it was possible to complete the testing of the group at the close of the fourth period of the game.

Except for the unusual condition of the substitution outlined above, the contests were played under actual game conditions. Only boys in excellent physical condition were used in the project. All had been playing basketball since early November. The tests were concluded within a period of slightly less than two weeks.

Specific findings

A compilation of the figures for both groups showed that under the new rules boys lost an average of one and a third pounds and only one pound under the old. Players recovered an average of 28.2 points in pulse rate two minutes after the close of their play in games under the old rules, and only 24.4 points under the new. Recovery in blood pressure averaged 22.9 points with the center jump and 19.7 points in the game without. Cases of advance in pulse rate before and after games played under the new rules of as high as 96 points were recorded, while under the old rules the greatest gain was 80 points.

A comparison of the group averages showing the variation in the two types of play follows.

	New Rules	Old Rules
1. Loss of Weight		
Group I	1.40	1.20
Group II	1.25	0.92
2. Pulse Recovery		
Group I	29.0	34.0
Group II	19.8	22.5
3. Systolic Blood Pressure Recovery		
Group I	22.5	25.3
Group II	16.9	20.5

Space does not permit an inclusion of the detailed individual tabulations. We found, of course, varying individual reactions, but believed that the group averages were the index essential to the correct interpretation of the results obtained.

General conclusions

We are not inclined to regard the results of our research as entirely conclusive, but do feel that the general agreement in the figures is certainly significant. From the results of our study we would conclude that there is an appreciable difference in physiological effect in the old and new game. It would seem that if the elimination of the center jump is to stand, additional provision for the elimination of strain, especially on youthful players, should be made.

A good many readers may feel that the difference in physical effect as demonstrated in this experiment is not sufficiently great to seriously affect a player. However, when one stops to consider that basketball has always been a strenuous activity, that a boy plays not one game but many during the season, and may participate over a period of years, things appear in a different light. We do not agitate for a return to the old game, nor unnecessary tampering with an already highly complicated code, but we do hope for safe and sane regulations, with the health of our boys the foremost consideration.

4th Year . . .

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Free!

To all coaches, Hillyard's NEW Basket Ball Chart and Score Book. Also Hillyard's "Tournament Bracket."

★ Developed by Hillyards many years ago . . . the first finish made especially for gym floors . . . produced after years of research and actual tests. . . . Special Gym Finish is still the most popular.

There is a Hillyard Trained Maintenance Expert in your community ready to serve you, to give you costs, gym markings, blue prints . . . his advice is FREE. Call, write or wire the Hillyard Chemical Co.

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From the States

This department includes correspondence from state high school coaches' associations and state high school athletic associations. All associations are invited to participate.

New Jersey

Basketball questionnaire

IN ANSWER to a questionnaire on basketball this past season, some interesting light has been thrown on the acceptance of the new rules. The questionnaire which this writer circulated asked the following questions:

1. Are they (boys) losing weight?
2. Are they gaining weight?
3. Are you having them examined regularly for signs of overwork (heart enlargement)?
4. Do they work as long as they used to?
5. Can they stand the gaff?
6. Do the boys like the new rules?
7. Have you been compelled to cut down the number of games for the season?
8. If you were recommending a change in the rules, what would you recommend?

The answers were interesting. The majority of answers indicated that there was no loss in weight and in some cases there had even been a slight gain. Those coaches who had their squads examined by a doctor, reported that there was no evidence of overwork or heart enlargement after the medical examination. In answer to the fourth question, most coaches stated that they had cut down on the length of the practice periods. According to the coaches (and they were unanimous in this), the boys "can take it." They like the new rules and they had not been compelled to cut down on the number of games for the season.

Recommendations for changes

The recommendations for changes in the rules were of interest. Bill Cartmill, president of the state's coaches association, recommended that the interval between quarters should be extended to two minutes, and that three time-outs be allowed in each half.

Coach Foley of last year's Bloomfield High state champions, recommended the return of the tap at center. Coach Arthur Lustig of the Weequahic High School team, declared that six personal fouls per game should be permitted; that the official should handle the ball after every goal; and the extension of time-outs from one to one and a half or two minutes.

James A. MacIntyre, secretary of the Coaches Association and coach at Morristown High School for over two decades, recommended the elimination of the 10-second back court rule, and that this rule be in effect only during the last quarter. He also recommended the elimination of the 3-second rule at the foul line, but asked for the enforcement of the rule within the foul zone area (the area inside the free-throw lane from the free-throw line to the end line). MacIntyre would like to see the return of the center tap and an extension of the time interval between periods.

Along with his report, MacIntyre asked some very pertinent questions, as for example: "I am deeply interested in the boy who is allowed to compete in football and then in basketball; what effect does this continued participation in sports have on the boy?"

"Chet" Redshaw, coach of New Brunswick High, liked the rules the way they are. He said, "I believe the present rules offer a greater opportunity to reach more boys, because larger squads are needed with the center jump eliminated. We cut the number of practices and the length of the practice, and used a larger squad. The boys like the game as it stands. I believe games on successive days should be eliminated, and will schedule accordingly next year."

CHARLES J. SCHNEIDER,
New Jersey H. S. Coaches Assn.,
Newark, N. J.

Ohio

Track questionnaire

AT ITS last meeting the Board of Control authorized a questionnaire on the high and low hurdles and the dropping of the javelin and medley relay from the lists of events. Although the Board voted at the Cedar Rapid meeting to drop the javelin and the medley relay, these two events were incorporated in the questionnaire. Early returns follow:

1. Do you favor the 220-yd. low hurdles distance and the 20-yd. spacing? (Yes, 101; No, 85.)
2. Do you favor the lower heighth in the high hurdles, 3 ft. 3 in.? (Yes, 173; No. 13.)
3. Shall the javelin be one of our track events? (Yes, 76; No, 114.)
4. Do you favor the medley relay? (Yes, 67; No, 121.)

Wisconsin

Baseball meets

FOUR schools have to date indicated an interest in holding a four-team one-day baseball meet. The Board of Control must know before its next meeting whether or not sufficient schools are interested in these meets to justify their organization. These meets have been conducted for the last 11 years and will be continued if a reasonable number of schools indicate an interest in them. All schools interested in conducting such meets are urged to communicate with P. F. Nevereman, secretary of the Interscholastic Athletic Association.

The meets are run under the following regulations: (1) No team award will be provided. (2) Each school desiring to conduct a baseball meet will be required to pay a sanction fee of $6. (3) The Board of Control will furnish the balls.

The annual state high school tennis meet will again be held at Neenah on May 20 and 21 with Principal John Holzman as manager. The state golf meet will be held in Madison on June 3 and 4 under the auspices of West High School and managed by Principal V. G. Barnes.

Oregon

Athletic insurance

FOR the past several years there has been a growing demand for some type of insurance that would provide coverage for our high school athletes. Recently, a policy providing coverage in football has been available for athletes, but the cost has been almost prohibitive to the average school.

At the present time an insurance policy is being worked out that will provide coverage to high school athletes for personal injuries sustained in practice, supervised gymnasium classes, games or field meets. The cost of such coverage is well within the financial reach of every high school in the state.

This policy is based on a flat schedule of benefits for specified injury and medical attention, with limited coverage for each specific case. Such coverage ranges from a small filling for a tooth to a major fracture, including the loss of eyes. A physical examination will be required for each student covered, and the school must cover for each of its major sports. Such a policy is patterned after the Wisconsin plan that has been in use for the past fourteen years.

State meets

A great deal of interest is being developed in boxing and wrestling this year. A state wrestling tournament was held in Salem on March 4 and 5 in which a number of schools competed in the following weight divisions: 95 lbs., 105 lbs., 115 lbs., 125 lbs., 135 lbs., 145 lbs., 155 lbs., 165 lbs., 175 lbs., and heavyweight. The University of Oregon and the Athletic Association cosponsored a state-wide boxing tournament at Eugene late last month.

The state high school golf tournament will be held in Corvallis on May 9, 10 and 11. This is a new undertaking but advance interest thus far assures its success.

The annual state track and field meet will be run off at Oregon State College on May 20 and 21. For the first time high school track men will try out the special high school hurdles, as this new change was not accepted until the present track season.

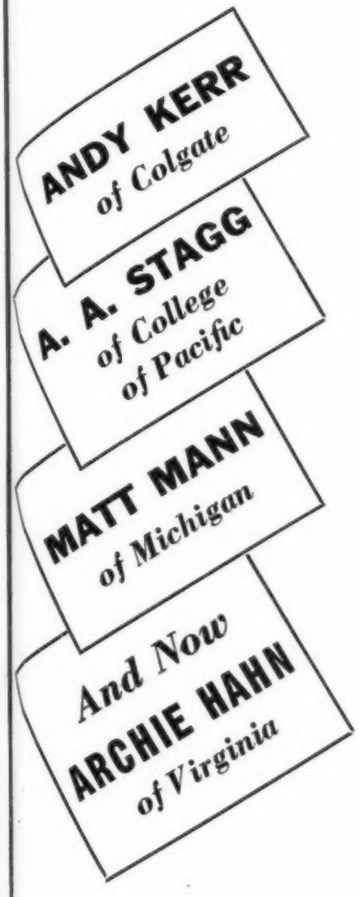
As far as indoor track in this state goes, the Seventh Annual Hill Military Academy Indoor Relay Carnival in

(Continued on page 34)

TOP FORM ★ PERFECT CONDITION

ARCHIE HAHN *Head Track Coach and Trainer, University of Virginia*

GIVES HIS RULE NO. 1 FOR ALL ATHLETES



● Another Important Poster for You

On the following pages is another poster of geniuine importance to every coach and athletic director—and to every athlete who is striving for TOP FORM and PERFECT CONDITION. It contains a message from Coach Archie Hahn of Virginia—a message from a man who, like Andy Kerr of Colgate, Amos Alonzo Stagg of the College of the Pacific, and Matt Mann of Michigan, has kept in prime condition all his life and is glad to let others know HOW.

● How to Use the Poster

This poster, strikingly printed in two colors, appears on the next two pages. We have placed it here so that you can be certain to have a copy. Remember, as an athletic director and coach, you have a greater opportunity to influence the development of the students in your school than most other members of the faculty. This poster offers you a chance to make that influence more effective than ever before.

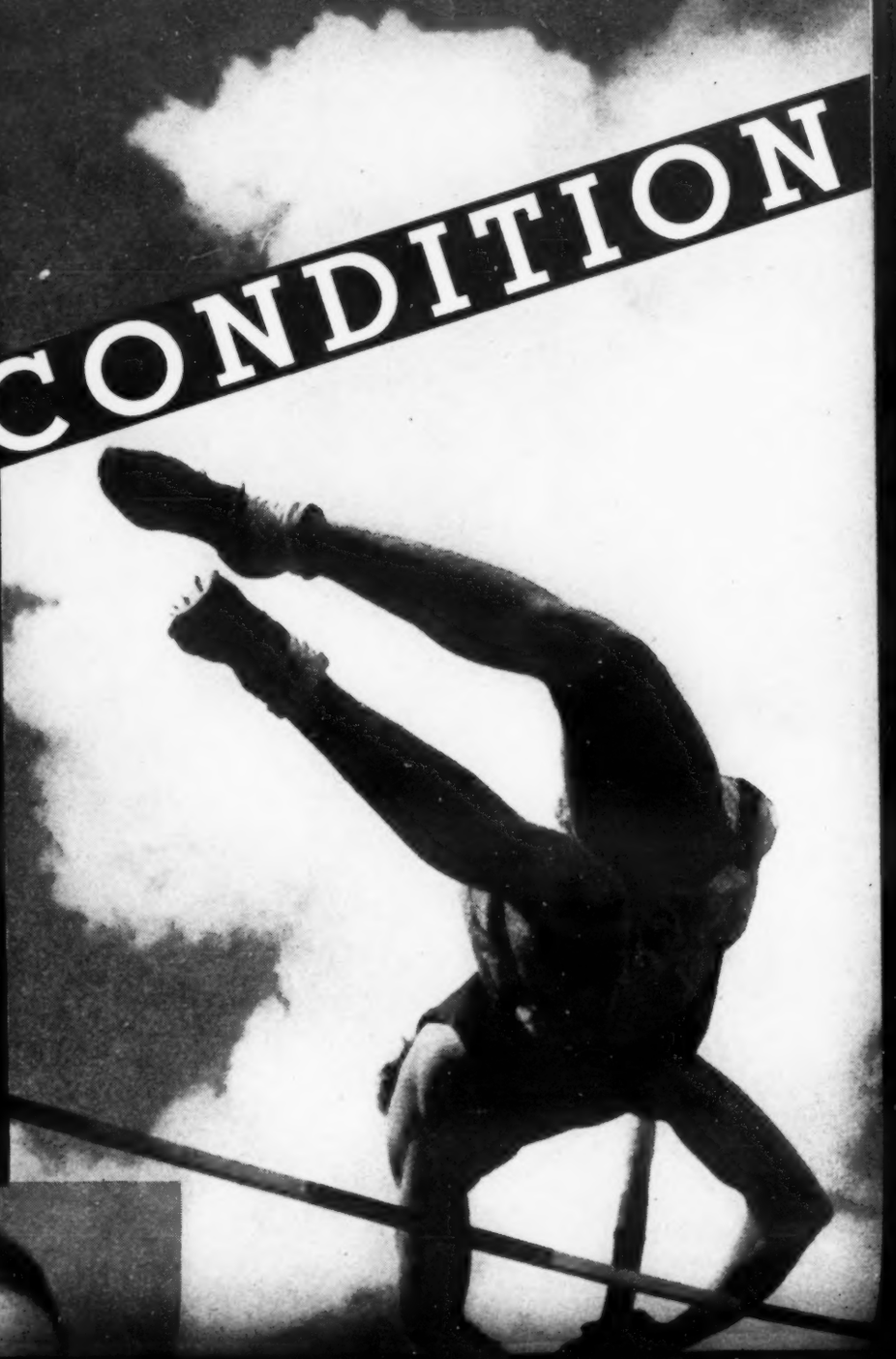
The poster can be easily removed without in any way damaging your copy of Scholastic Coach. With a knife or letter opener just fold back the two staples in the center of the spread and lift out the poster. Then mount it on your bulletin board, where its message can be read not only by the members of athletic squads but also by all other students in your school.

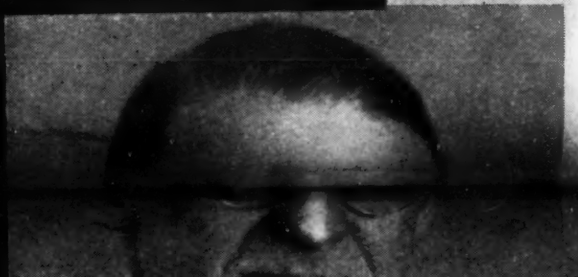
If you wish additional posters, we will gladly send you any number up to five from the limited supply we now have. If for some special reason you desire a larger quantity we will endeavor to fill your order. Write direct to this office or use the Mastercoupon on the last page of this magazine.

ALCOHOL EDUCATION, 1730 CHICAGO AVENUE, EVANSTON, ILL.

★ TOP FORM

★ PERFECT CONDITION





PRACTICAL OBSERVATIONS IN ALCOHOL EDUCATION

A Message To Coaches and Physical Education Directors

These blackboard drills are designed to give you SCIENTIFIC and PRACTICAL FACTS about alcohol and its effect on the human body. Coaches report excellent reactions to them when they are used in open discussion with athletes and students on training rules.

ARCHIE HAHN, head track coach and trainer of the University of Virginia, was in his active days a great Olympic sprinter. His message to all athletes and students is important because it leads the way to better health.

In recent posters, we have given scientific reasons why alcohol taken internally is not good for human organisms because of its effects on endurance and the nervous system. In this blackboard drill, however, we will give examples of men who are "tops" in their line and show what perfect condition has meant to them. Andy Kerr of Colgate, Alonzo Stagg, dean of American football coaches, Matt Mann, one of our great swimming coaches, Archie Hahn, one of the greatest of the cinder path, have all given their views on training and alcohol. These men have all reached or are past middle age and yet they are in fine physical condition.

Coach, have your boys look around, read the sports pages in your local newspapers, and they will read about hundreds of men in their thirties, forties, or fifties out on the athletic field with their teams going through the paces, not merely directing, but taking active part. These men are in perfect physical condition and they have kept themselves in this condition by observing fundamental rules of health.

Ask your boys if they have ever boxed three rounds, and they can verify the amount of physical strain and endurance needed for even so short a bout. Boxing, just as other sports, calls for perfect physical condition and endurance, and it is interesting to note the statement of Max Schmeling, the great heavyweight, "I can declare with the best conscience that I have maintained my old principle: abstain from alcohol and nicotine." This is an interesting statement because it goes hand in hand with Schmeling's fine record as a boxer. Picture a man thirty-two years old, an age when prize fighters are supposed to be on the down-grade, meeting Joe Louis, a young giant of twenty-two, and knocking him out in twelve rounds. He just didn't knock out a young twenty-two year old fighter, himself in good condition, but the brown bomber, a killer, or whatever else the sports writers call this young champion. THE ANSWER: PERFECT CONDITION OVER A PERIOD OF YEARS.

It is just as important for your boys to maintain perfect physical condition, whether they plan to be prize fighters, coaches, professional or business men, for good health is a fundamental necessity for success in any field of endeavor. They can do a lot towards guaranteeing the maintenance of good health through the years by abstinence from alcoholic beverages.

A general view of the Monday morning formal session, Floyd A. Rowe of Cleveland reading a paper on the value of interscholastic athletics.

NATIONAL FEDERATION ANNUAL MEETING

MEETING in conjunction with the National Educational Association in Atlantic City, N. J., on Feb. 28, the National Federation Council considered various athletic problems which were of interest to high school athletic organizations. It was a rather imposing array of high school educators that discussed these matters. From the Far West there was J. D. Meyer of Spokane, Wash. From the eastern seaboard came Harrison Lyseth of Augusta, Me. Nineteen states between these two extremes were represented by members of state high school athletic association boards of control or executive officers.

The topics ranged from those which concerned progress in the New England high school organization through the so-called new deal in high school athletics in New York and to a comparative study of the actual value or lack of value in the athletic program in the schools. At the formal session on Monday morning there were three speakers: W. B. Spencer of New Haven, Conn., Floyd A. Rowe of Cleveland, Ohio, and F. R. Wegner of Roslyn, Heights, N. Y.

Mr. Spencer outlined the trend of athletic affairs in "conservative" New England. Activities along this line were centered for years in the New England Headmasters' Club. However, the control exercised through this non-specialized organization was not as rigid as the control exercised throughout the central and western states by the more highly specialized state high school athletic organizations.

Connecticut was the first of the New England states to begin a program of state control. Since joining the National Federation, their progressive work has had considerable influence throughout neighboring states. Partly through this influence there has been a pronounced effort on the part of secondary school men to acquire a high degree of control over their own athletic activities. Until recently these activities were largely controlled by colleges, commercial clubs, newspapers or other non-high school agencies.

The whole section is still somewhat bothered by the apparent determination of some of the colleges and other organizations to impose upon the New England high schools a considerable amount of interscholastic competition in meets and tournaments which have little relationship to the educational program. Gradually the states are working out a program designed to provide all needed athletic activities and to eliminate all influences except that of the high schools themselves.

Mr. Spencer expressed the sincere hope that other New England states would soon join the National Federation and cooperate in their program to center the control of high school athletics in the high school organizations.

Rowe on athletic values

Psychologists have made comparative studies of identical twins to determine the effects of formal training or lack of formal training on the habits and abilities of individuals of approximately equal intelligence. Likewise the sociologists have made comparative studies of groups brought up on a non-civilized island as compared with a similar group which has been subjected to the fast tempo of a highly civilized society. The state high school athletic organization of Ohio believes that no one will ever be able to answer the question as to whether athletic activities have actual value until such time as a comparative study of athletes and non-athletes is made over a period of years. Floyd A. Rowe outlined the plan which will be followed by an investigation committee centered in the educational department of Ohio State University.

The Ohio High School Athletic Association at its June, 1937, meeting, appropriated $5,500 from its general and special funds, for the purpose of initiating a study. The commissioner was asked to request the cooperation of Ohio State University, particularly the Bureau of Educational Research and the Division of Research of the Medical College, to cooperate in an investigation of the educational, physiological, sociological and psychological effects of interscholastic athletics on boys in the state of Ohio, as compared with those boys not interested in the athletic program.

Since the June meeting, a committee has been organized, having as active members representatives of the departments of Ohio State University, the volunteer organizations of the state, and the State Department of Education.

The definite fields of research are, as indicated: Psychological—having to do with the whole range of mental functions (sleep, behavior, emotions, skill-coordinated movements, etc.); Physiological — having to do with heart, lungs, urinalysis, basal metabolism, blood examination, etc.; Sociological — having to do with socializing influence, leadership influence, influence on career, on leisure time, personal prestige, philosophy of life, school citizenship, etc.; Educational—having to do with classroom achievement in comparison with seasons of sport, Intelligence Quotient, school citizenship, age - grade placement, securing positions in later life, etc.

The committee is actively engaged in outlining the field of study to be followed, with the hope that a start may be made in field work not later than September, 1938.

The New York new deal

Like most of the eastern states, New York has regulated their high school athletic affairs through local organization. Considerable responsibility has been placed on each high school and the state association exercised little actual authority as compared with that in the central and western states. On various occasions decisions of the state group were ignored by schools in various sections of the state and little could be done about it. This condition led to a decision on the part of the high school men to attempt a new program to be worked out in conjunction with the New York Board of Regents which would have full authority to enforce

(Continued on page 24)

measures adopted in the new program.

F. R. Wegner, executive secretary of the New York association, has been active for a number of years in the state high school athletic work. He outlined the plans which have been worked out through the cooperation of the state association and the Board of Regents and which will be put into effect in September, 1938.

The New York State Public High School Athletic Association has been in existence for 13 years. In 1925 under the leadership of Dan Chase, then in the State Department of Education in Albany, the present Association was organized.

In 1929 a complete reorganization of the Association was made and equal representation given to the three branches of school service, namely superintendents of schools, principals of high schools and athletic directors or coaches. This organization continued to carry on the rather general functions of the state association, that is the development and enforcement of eligibility rules, conduct of sectional and state championships in the various sports and publishing the bulletins.

In 1931 the Association, after a referendum to all the schools, abolished state championship games, and since that time no state championship meets and tournaments have been conducted. Consequently, in New York State since that time, the peak of an athletic season is participation in the sectional tournaments in any one of the eight sections into which the state is divided.

It is interesting to note that even this competition has been discouraged and dropped by at least one-half of the sections.

It should be pointed out that all actions of the State Association have been taken as a result of a referendum submitted to all the schools, the constitution providing that such action is necessary before any major change is made.

In 1929 the Athletic Protection Plan was organized. This plan, modeled somewhat after the Wisconsin plan but in no way subsidized by dues or receipts from state tournaments, existing entirely upon the moneys paid in for each boy, has grown until now over twelve thousand boys are covered each year.

In 1935 the Association at the request of Dr. Hiram Jones of the State Department of Education, authorized the appointment of a joint committee on state athletics whose duty it was to investigate the entire problem of athletic eligibility rules and their relation to the high school curriculum. This committee had representatives from every existing educational body in the state. This committee made a six months' study of the problems in the state and came back with the report and recommendation that the State Board of Regents be petitioned to adopt defensible rules governing the physical education and athletic program. This report was endorsed by 95 per cent of the principals and schools in the Association, and as a result of this endorsement, the Committee went on to develop a basic minimum set of regulations that would apply to all the schools of the state, public and private alike.

Again these regulations were endorsed, and upon being submitted to the Board of Regents and Commissioner of Education of the State were adopted as a basic code. (For list of regulations, see page 12 in the October, 1937, Scholastic Coach.)

Following the luncheon meeting which was attended by representatives from 21 states, reports were given by members of various National Federation committees. F. P. Maguire of Pennsylvania reported on football rules activities. He stressed the enthusiasm, sincerity and intelligence with which the football rules committee were able to work. The major consideration for members of this committee has been the adapting of the football rules to high school play. He brought out the fact that a set of rules has been provided which retains the fundamental features of the game, but at the same time introduces certain factors designed to limit physical risks of high school boys.

Dr. Maguire emphasized the point that physical education men must recognize the fact that there is a vast difference between the objectives of providing football for high school players and for adults. He outlined the satisfaction which the high schools of Pennsylvania had found in the use of the interscholastic rules. He expressed the opinion that whereas there had been a great number of high school men who had originally expressed doubt as to the wisdom of using an interscholastic set of rules, at the present time the high school men were almost unanimously convinced that this step of the Pennsylvania association was one of the most progressive they have taken.

Pictures on Opposite Page

At the annual meeting of the National Federation of State High School Athletic Associations, Scholastic Coach's roving camera candidly "shot" this group of national and state officers.

No. 1: C. W. Whitten, secretary-treasurer of the National Federation (left) and E. R. Stevens, Federation president.

No. 2: H. R. Adams of Utah (left), newly elected member of the Federation executive committee, with F. E. Stayton of Missouri.

No. 3: H. V. Porter, assistant manager of Illinois (with hands clasped over knees), and J. D. Meyer of Washington.

No. 4: Walter B. Spencer of Connecticut delivering his talk on New England activities at the formal session.

No. 5: F. R. Wegner, secretary of New York.

No. 6: C. E. Forsythe, secretary of Michigan.

No. 7: Scanning the financial report is C. W. Jackson of West Virginia.

No. 8: F. L. Biester of Illinois (left) with P. A. Jones of Pennsylvania.

No. 9: R. E. Rawlins, secretary of South Dakota, on left, exchanging a last word with C. W. Whitten before the meeting was called to order.

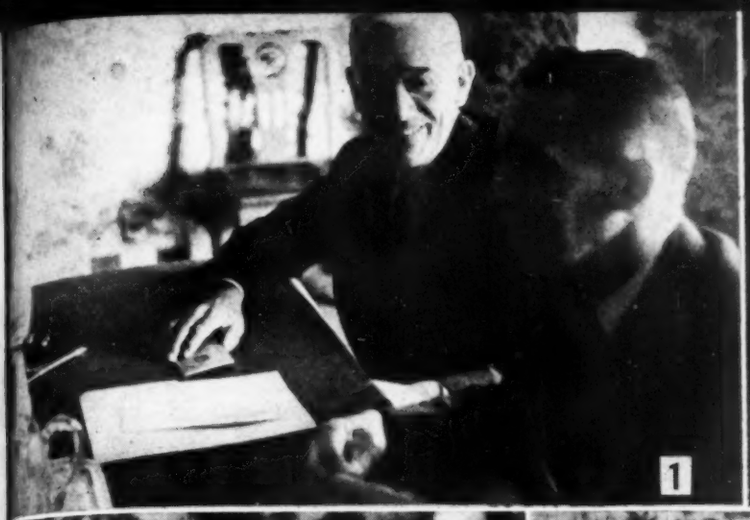
Basketball rules activity

H. V. Porter, representative of the National Federation on the National Basketball Committee, summed up the work of the Federation in respect to high school basketball. The National Federation is probably the best organized voluntary athletic group in the world. It is especially well fitted to determine the type of game that is best fitted for high school play and to make the rules such as to insure this type of game.

For many years the high school group was content to accept any athletic rules and regulations which were formulated for adults and handed down (or up) to them. Recently they began to subject all these activities to scientific investigation and found that various phases of the athletic activities were not adapted to high school use. They began to take an active part in the making of the rules and in securing proper administration of these rules. The right of the high school organization to do this cannot be questioned. This responsibility is also a great educational opportunity, for when the high school group takes an active part in the writing of the playing rules it necessitates an educative program which influences all of the schools. It also necessitates the organizing of the high school forces so that the team work of thousands of progressive coaches and administrators is encouraged in activities designed to improve the game.

A few years ago little attention was given to the effect of the size of the floor on the high school game. The result was that architects throughout the country usually took the minimum size specified in the rule book, i.e., 60 feet by 35 feet and thought they were complying with the best interests of basketball. State executive officers began to find that many of difficulties were caused by problems which had their origin in small courts where contact could not be called. Under direction of the high school group, the help of state associations and of hundreds of coaches and administrators was enlisted in a thorough investigation relative to the matter. The result was the insertion in the rules of the optimum size for a high school court. This was 84 feet by 50 feet with adequate out-of-bounds space. This change in the rules was followed by a campaign to eliminate the small court. In the last two years there have been approximately one hundred new high school gymnasiums erected in Illinois alone. The number for the country as a whole probably reaches five thousand. In nearly all of the cases the new gym-

(Concluded on page 26)



National Federation Meeting

(Continued from page 24)

nasiums have been greatly influenced by the optimum size as stated in the rules book.

The new molded basketball has been developed to a point where at least four states have officially adopted this ball for all tournaments. Other states have already made adoption for next season and it is a safe prediction that this type ball will entirely replace the sewed type within the next couple of years. Cold figures prove that the schools of the country will actually benefit to the extent of half a million dollars or more per year. In addition, the new ball eliminates the dissatisfaction which results from the use of balls of inaccurate shape and reaction. For those who are interested in answering their less informed constituents as to the values in membership in the Federation, here is plenty of ammunition. The Federation work in connection with high school footballs and basketballs alone has actually saved the schools in any given state enough to pay the small Federation dues for a hundred years. (For complete discussion of the new molded ball, see page 20 in the September, 1937, Scholastic Coach.)

Other athletic reports

C. E. Forsythe of Lansing, Mich., reported on swimming activities. He outlined the efforts of his group along the line to secure sentiment from the high school men of the country relative to swimming activity. He commented on the cordial reception that had been given the high school proposals by the national committee. He expressed regret that for the second year, the publication of the rules was altogether too late for the most complete service to high schools but expressed the hope that this fault might be corrected for next year.

At the conclusion of Mr. Forsythe's talk, F. W. Luehring of the University of Pennsylvania, one of the college representatives on the swimming rules committee, assured the group that he would use every available means to secure an earlier publication of the guide.

A letter from B. E. Wiggins of Columbus, Ohio, outlined wrestling rules activities.

A report on safety equipment was made by E. R. Stevens of Independence, Kans., and a written report from E. A. Thomas of Topeka, Kans., was read. This report outlined work connected with the attempt to adapt track activities to high school athletes. Attention has been centered on the hurdles and on the discus. The new 39-inch high hurdles seemed to be entirely satisfactory. There is considerable difference of opinion relative to the distance between the low hurdles and further investigations are being made relative to this particular matter. Considerable work has been conducted to determine what constitutes the proper size and weight of a discus for high school athletes. As the result of this investigation, a high school discus has been designed and will be made optional for meets in 1938. The specifications for the high school discus are included in the 1938 track guide.

The all-star team evil

During the last year there has been a growing tendency on the part of promoters to form all-star teams made up of boys who are still in high school. In most cases the participation in games scheduled between these all-star teams makes a boy ineligible for further participation in high school athletics. The scheduling of such games also prolongs the season of a given sport beyond any reasonable limit. Educators can see no justification for this exploitation of high school competitors. If more participation was deemed desirable the high schools themselves could easily provide it. The entrance of outside organizations in such activities tends to nullify the good work the high school organizations have done in limiting contests to a given season.

Because of the potential evils in this growing practice, the state high school executive officers voted to recommend that the National Federation Council express their disapproval of such contests. At the Monday afternoon meeting this recommendation was acted upon favorably. The National Council unanimously voted that the Federation go on record as being opposed to all games between so-called all-star teams made up of boys who are still in high school, and also as being opposed to all post-season games whether by regular school teams or by all-star teams.

Election of officers

The terms of E. R. Stevens of Kansas and G. A. Chamberlain of Wisconsin expired this year. Consequently there was an election of two members to the executive committee. The voting resulted in the re-election of E. R. Stevens and the election of H. R. Adams of Hyrum, Utah, for a period of three years. At a later meeting of the executive committee, that body re-elected E. R. Stevens as president of the National Federation.

The executive committee appointed the following men to represent the National Federation on the various rules committees: **Basketball:** M. C. Cunningham, Desloge, Mo., F. P. Maguire, Harrisburg, Penn., H. V. Porter, Chicago, Ill., Floyd A. Rowe, Cleveland, Ohio. **Track and Field:** E. A. Thomas, Topeka, Kans. **Swimming:** C. E. Forsythe, Lansing, Mich., **Wrestling:** B. E. Wiggins, Columbus, Ohio.

New Books

TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION. By John F. Bovard and Frederick W. Cozens. Pp. 427. Philadelphia: W. B. Saunders Company, 1938. $3.

THIS book (second edition) is an outstanding contribution to the field of tests and measurements in physical education and should prove invaluable to the physical education instructor.

The text, as in the first edition, consists of three sections. Part I, *The Status of Measurement in Physical Education*, concerns itself with a justification for a testing program, pointing out the needs and uses of tests. A historical sketch, beginning with the development of anthropometry, brings us up to our present day testing program. The authors take up in detail typical contributions in the fields of anthropometric tests, strength tests, cardio-vascular tests, athletic ability and achievement tests, sport technique tests, and knowledge and information tests. A summary of every conceivable type of test in physical education is included.

Part II, *Tools of Measurement*, contains a brief outline of statistical methods and methods of scoring tests—the type of material contained in a book on statistics, but in a concentrated form. This makes it a ready reference for the reader.

Part III, *Theory and Practice of Test Administration*, explains the steps necessary to construct a test in physical education, with the technique that should be considered in its administration.

The Appendix contains many of the tests referred to in the body of the text.

The only weakness of the text, as the reviewer sees it, is the elimination of the references that were contained in the first edition, in one section of the book. The authors feel that a bibliography of selected references at the end of each chapter is handier for the reader. The writer would have liked to see both, as the general summary is invaluable to the research worker.

HYMAN KRAKOWER

N.C.A.A. 1938 OFFICIAL TRACK AND FIELD GUIDE. No 411, Spalding's Athletic Library. Pp. 120. New York: American Sports Publishing Co. 25 cents.

LAST year, to solve the perplexing and burdensome problem of ties in the high jump and pole vault, the rules committee drafted a four-paragraph clause under Rule 30 which precluded the possibility of any first place ties in these events. Now, after a year's trial, the rules makers are right back where they started from at the end of the 1936 season. For the special 1937 legislation on ties has been stricken from the code this year, and the same rule will cover ties as the one prior to 1937.

Sprint Start

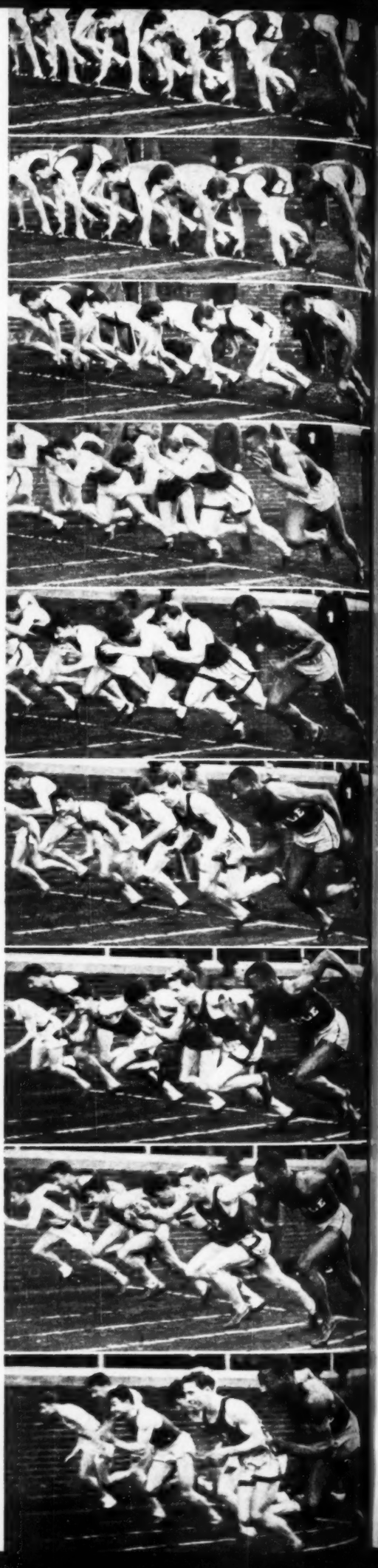
START of a heat of the 100-yd. dash at the University of Pennsylvania relays at Franklin Field, Philadelphia, on April 24, 1937. This fast field includes from right to left: Eulace Peacock of Temple, Easton Burlingame of Yale, Gibbons Young of Washington College (Chestertown, Md.), Marty Glickman of Syracuse, Harry Woodward of Duke, and William Wilson of Princeton.

The first picture shows the men in the "get set" position of momentary steadiness as they await the gun. The hips have been raised into starting position with the body weight on both feet and arms. With the exception of Woodward, all five men have their hips more or less on a line with their shoulders. The Duke entry is exceptionally tall for a sprinter and is using more of a bunch start. In the set position the sprinter may look down the track as far as possible without cramping his neck muscles, but Peacock and Burlingame in the two near lanes are looking straight down at the track, even though they are employing the same general form as the other sprinters.

In the second picture it is difficult to determine whether Young (third from right) has anticipated the gun or whether the gun has already been fired and Young has a shorter reflex time than the others. For his right hand has already been lifted from the ground for the drive off his marks. Burlingame's hands, too, are lifting imperceptibly. In the third picture the gun has been fired and the sprinters are applying pressure on their back legs while moving the hands up into sprinting position. The beginning of the back leg drive is followed quickly by the driving action of the front leg which lasts longer than the application of force by the back leg.

As force is applied by the legs, the shoulders come up higher than the hips and the hands swing forward into their natural sequence. In the fourth picture the back legs start forward and the opposite arms swing forward and upward. Wilson in the far lane is the only man who shows a left-footed dominance; he starts off the left leg. Peacock and Glickman swing their left arm up to about the same height, slightly above the shoulders; Burlingame well above the shoulder, and Young below. Instead of focusing his eyes in the direction of the run, Young has dipped his head.

In their first two strides, the sprinters exert terrific force with both legs and arms. The second stride is slightly longer than the first and the trunk is slightly more erect. As they begin the third stride in the last picture, Young and Woodward have already been left behind. Peacock won this heat in 9.7s., Glickman was second, Wilson, third, and Young came up fast to nose out Burlingame for fourth. Peacock defeated Ben Johnson of Columbia University in the finals.



Softball

(Continued from page 13)

trickery rather than skill in defensive play.

The word "balk" in baseball has always provided for the advance of runners when any of the specified offences were committed. In softball since runners were compelled to hold their bases until the pitch was made, the early rules makers did not see the necessity for advancing the runners and attached the simple penalty of calling a ball in favor of the batsman. The lightness of the penalty was an open inducement to resort to all sorts of trickery to get the runner called out for leaving his base before the pitch was released. Because the advancement of runners was the penalty for illegal pitching in baseball, and not so in softball, there developed in the game a belief that "There are no balks in softball." This thought was further encouraged by the fact that until the 1938 softball guide the illegal pitches were not specified under one heading. The Joint Rules Committee on Softball prefers that these offenses be called "illegal pitches" rather than "balks."

All "illegal pitches" are "balks" and vice versa. The penalty, however, is greater in softball in that all baserunners are advanced and a ball is called. Calling of a ball in case of an illegal pitch presents another contrast. In baseball the batter is never awarded first base when a "balk" is called, while in softball the batter goes down if the illegal pitch constitutes the fourth ball. It is apparent, however, that the batsman is awarded a base on four balls and not on the illegal pitch.

Base-running

Base-running strategy, both offensively and defensively, differs in the two games. Softball runners must make and keep contact with their bases when the pitcher has the ball in pitching position and until the pitched ball leaves the hand of the pitcher. A runner on third base when a pitch is started cannot score on any pitched ball which passes the batsman, providing the ball is returned directly to the pitcher.

It is important to note that the runner is compelled to hold his base only when the pitcher has the ball in pitching position. If the pitcher steps out of position while the ball is in play, the runners on first and second bases may leave their bases and advance at their own risk. It is good play for all runners to make a break to advance the instant the pitch leaves the hand of the pitcher in the hope of drawing a play which will really allow them to advance. With a runner on third, runners on first or second base should always do this to draw a play on themselves and permit the man on third to score.

Just as in baseball, the catcher may prevent the advance of a runner by returning the pitch to a player ahead

(Concluded on page 30)

Badminton Fundamentals

(Continued from page 12)

Fig. 11 shows a slightly varying right-foot-forward stance for the short service, illustrating also a position for an alley service. This type of stance is used more frequently by the advanced player in combination with a toss.

This fact, some players maintain, is an argument in favor of the right-foot-forward stance. The fact that the right-foot forward places the receiver more in readiness to receive a backhand return is not as important a factor in the long service as in the short service, since there is adequate time to prepare for the return.

In the progressive action strip of the short "out-of-the-hand" service stroke, it will be noted that the movement of the racquet is from the wrist—like a gate swinging on its hinge. The bird is tapped lightly. In the first picture, the bird and racquet are measured. In the next picture, the backswing has begun from the wrist and is completed in the fifth picture. This has been accomplished with very little arm movement.

Note in the seventh picture that the arm holding the bird has not moved out of its original position as the bird is struck—the bird is actually hit out of the hand. There is of course a follow through of the arm with the swing after the bird is hit, as seen in the last picture.

Faults in short service

As we have indicated, the toss service is a rather difficult undertaking for the beginner. Since we are largely concerned with him, we conclude the subject of the service with a list of a few of the more common faults in the short service only.

Bird too close to the racquet handle. This results in a poor racquet contact or none at all. There are two reasons for this fault: the bird is held too close to the body; or, in an effort to hit the bird too hard, the arm is swung outward, toward the bird and away from the body. In short, this is a failure to use the "gate swing."

Moving the whole arm. This is a sort of "push" stroke—a very common fault of beginners in all strokes. In the service, this is again a failure to use the "gate swing."

Legs stiff, feet flat. Failure to relax and assume a position for quick movement. In short, the player is not "on his toes."

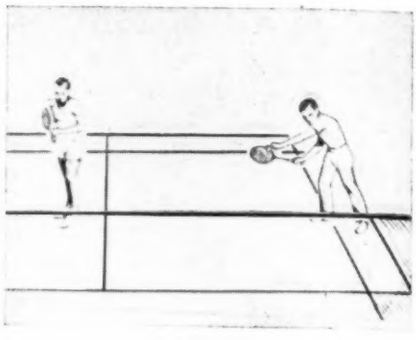


Figure II

Directional fault of flight. There are two main reasons for this fault: the hips may be pointed incorrectly (not in line with proposed flight); or the racquet may not be at right angles to the proposed line of flight at the moment of contact.

Fault in angle of flight. That is, in upward angle of flight. As already noted, flights at a sharp upward angle leave the server open for a "smash" return. This fault may result from: the racquet itself being lofted, i.e., not at right angles to the floor; or stroking with a circular underswing.

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Softball Play

(Continued from page 29)

of the runner, for instance to the second baseman with a runner on first base. Care should be taken, however, not to do this with a runner on third base, unless there is more than an even chance of making the third out on the other runner before the man on third can reach home. A simple return of the ball to the pitcher will hold the man on third base, while a return of the ball to any other player than the pitcher will permit the runner on third to score if he can make it.

It is also important to remember that the rule which prevents a runner on third base from scoring on the throwback applies only to a runner who was on third base at the time of the pitch. A runner who was on first or second bases at the time of a pitch, and who reaches third in the course of a play or series of plays, may continue on home any time before the ball is again held by the pitcher in pitching position. A play already in action cannot be stopped by the pitcher simply getting the ball in pitching position. The fielding team must, by its own vigilance, hold runners on their bases.

The softball rule requiring runners to keep contact with their bases permits much better strategic position of the fielders. Once the pitcher has the ball in pitching position, the burden of watching the runner is shifted to the umpires and fielders may give their whole attention to the batsman. In baseball, the fielders must assume a defensive position that will permit them to watch both the batsman and the runners.

With the differences briefly outlined, the same general principles may be applied to both games.

Coaching School Directory

BUTLER UNIVERSITY—Indianapolis, Ind. Aug. 8-13. Paul D. Hinkle, director.

CORNELL UNIVERSITY—Ithaca, N. Y. June 27-July 2. George K. James, director. **See advertisement on this page.**

DUKE UNIVERSITY—Durham, N. C. July 25-30. Wallace Wade, director. **See advertisement on this page.**

INDIANA BASKETBALL SCHOOL—Logansport, Ind. Aug. 15-19. Cliff Wells, director.

KANSAS STATE HIGH SCHOOL — Topeka, Kans. Aug. 22-27. E. A. Thomas, director.

MORNINGSIDE COLLEGE—Spirit Lake, Iowa. Aug. 15-20. J. M. Saunderson, director.

NORTHWESTERN UNIVERSITY—Evanston, Ill. Aug. 15-27. K. L. Wilson, director.

PENN STATE COLLEGE — State College, Penna. Main Session, June 27-Aug. 5; Inter-Session, June 7-24; Post Session, Aug. 8-26. **See advertisement on this page.**

TEXAS HIGH SCHOOL—Lubbock, Tex. Aug. 1-6. Carroll Wood, director.

UNIVERSITY OF CALIFORNIA — Berkeley, Calif. June 20-24. Leonard B. "Stub" Allison, director.

UNIVERSITY OF KENTUCKY—Lexington, Ky. June 6-12. Bernie A. Shively, director.

UNIVERSITY OF MINNESOTA—Minneapolis, Minn. June 13-18. Louis F. Keller, director.

UNIVERSITY OF NORTH CAROLINA—Chapel Hill, N. C. Aug. 15-27. Robert A. Fetzer, director.

UNIVERSITY OF WISCONSIN — Madison, Wis. June 27-Aug. 5. G. S. Lowman, director.

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TWENTY-FIVE years ago there was little opportunity for coaches to broaden their knowledge. The institutions which offered courses specialized in physical education and there was practically no instruction in the coaching of the popular competitive sports.

Realizing the need for coaching courses, George Huff established a summer coaching school at the University of Illinois in 1914—one of the first coaching schools on record. The original Illinois summer course was a six-week affair with a faculty consisting of Bob Zuppke, football; Ralph Jones, basketball; Harry Gill, track and field; and Huff, baseball. So well was the coaching school received, that the University of Illinois five years later established a four-year course in physical education and coaching (1919).

In later years many other schools seeing a fertile field, also opened their doors to coaches for summer courses; last year there were about thirty-five of these schools. The schools offer a splendid opportunity for both the young and old coach to come in contact with famous men in the profession and to get concrete presentations of basic fundamentals and techniques, and clear and specific methods to teach them.

This is really a period of technical training and gives the coach a chance to adjust and adapt his material so that no time will be lost at the beginning of the season.

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FREE— Order your copy of these drawings today. This muscle chart will be sent to you upon request, together with a free sample. Address W. F. Young, Inc., 400 Lyman Street, Springfield, Mass.

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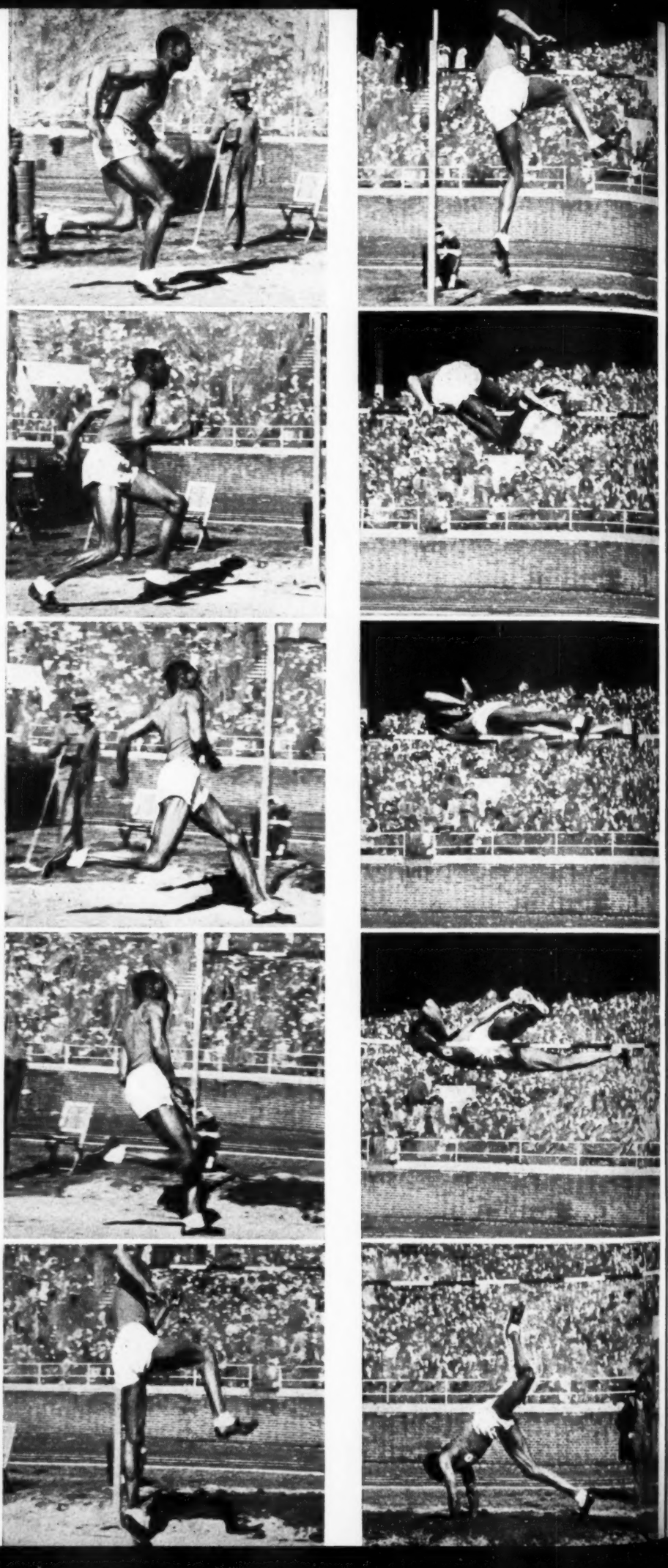


High Jump by Albritton

By Larry Snyder, Track Coach, Ohio State

USING a "straddle" version of the Western Roll, David Albritton of Ohio State University—co-holder of the world's record (6 ft. 9¾ in.)—is shown clearing 6 ft. 5 in. at the 1937 Penn Relays.*

Some 25 years ago George Horine of Stanford University first used this style. Since then scores of jumpers have at one time or another tried it only to discard it for the more orthodox Western (back or side to the bar).

Albritton is what I would call a power jumper, as compared to many of the present day jumpers who sneak up to the bar and apply power only in the last two strides. Dave uses fast, long strides and approaches the take-off at full speed. It is obvious that he requires a hard, dry take-off surface to convert this forward momentum into a vertical effort. His best jumps have always been made during the summer months, when the hot sun has baked the ground into a perfect surface for taking off.

Dave cannot jump higher than 6 ft. 2 in. without a great deal of conditioning. This consists of jogging, a lot of fast striding, running over four or or five high hurdles half a dozen times a day, and—after his legs are strong enough to stand such work—full speed 220's and 440's. Just a few weeks before his record breaking performance at Randall's Island, he ran on the Ohio State one-mile relay team in the Western Conference championships.

All-round athlete

Six feet, one and one half inches tall, Albritton is the sinewy type of athlete who plays every game well. He has run the high hurdles in 14.7, is a better than average broad jumper, a great basketball player and was intramural champion in the light-heavy and heavyweight boxing classes during his sophomore and junior years.

He is a team man throughout the dual meet season, competing in three and four events each Saturday. It is only when the championships are reached that Dave specializes in the high jump. Tied and defeated at times by his teammate, Mel Walker, during the early season last year, Albritton then went on to win championships in such meets as the National Collegiate A.A., the A.A.U., the World Labor meet and the Dallas invitation games. As a member of an American track team which toured Japan during the late summer, he continued undefeated.

To build up speed in his appoach, Dave uses five walking and five running steps. He hits his check mark at the end of his first running stride, then drives toward the bar with long, powerful strides, as shown in the first two pictures. No. 3 shows him straightening up for the take-off while in 4 he has landed on his left heel, leg fully extended to serve as a brake, and he is about to convert his forward speed into an upward spring. He is gathering for the take-off, arms at his side waiting for his body to ride over his jumping leg so that all the spring may be applied upward.

Take-off

In No. 5 he is ready to take off; the right leg swings up until the thigh is parallel with the ground and the arms are lifting to assist the jumping foot. In No. 6 he is dipping the left shoulder and starting to cut the left arm back and under his body to assist him in the turn or straddle. The left (jumping) leg has been drawn in toward the body in No. 7 and the right leg and his entire body have passed over the bar.

Landing

Now, in No. 8, you see the start of the frog kick which will enable him to elevate the trailing leg to a height sufficient to cross over without touching. In the next picture (No. 9), the trailing leg has been forced upward by the combined effort of the frog kick and the roll away from the bar. The landing, No. 10, is entirely different from the Western landing. His lead leg is the first down. In the Western or Osborn roll, the jumping leg is first to land.

Earlier, I spoke of the necessity for a hard take-off surface for this power running style. Here Albritton was faced with a crumbling take-off—a hard surface that had cracked and pulverized. Dave was forcing his jump a bit (starting to lean into the bar too soon), thus losing a bit of the upward drive and making it doubly hard to time a trailing leg that was lagging too far behind.

Albritton has a style similar to Ed Burke's (Marquette).

*At this height Albritton tied Al Threadgill of Temple University but the latter was awarded first because of the least number of tries in clearing the winning height. For progressive action pictures of Threadgill, see page 9.

From the States

(Continued from page 18)

Portland on April 1 was beyond a doubt the outstanding show of the season. Such noted world's champions were invited as Glenn Cunningham, Cornelius Johnson, Don Lash, Earl Meadows, George Varoff, and Les Steers. Entries were received from 73 high schools and 27 colleges and universities.

TROY D. WALKER,
Oregon H.S. Athletic Assn.,
Portland, Ore.

Connecticut

Athletic interest high

AS THE spring program gets under way in our state, there appears to be added interest in interscholastic competition, at least in the events sponsored by the state Conference. At various intervals one gains the impression from the more academic type of physical educational literature, as well as an occasional thrust in the daily press, that interschool athletics is doomed, not only from the fact that intramural competition is better suited "in a democracy" such as the public schools, but that spectator interest is waning.

Nothing could be farther from the facts, at least in Connecticut. The annual basketball tournament, conducted during the first two weeks of March and on the same plan as last year, attracted the largest group of teams (and schools) ever to enter a Conference-sponsored event. As a natural corollary, spectator interest ran into new figures, also. Details of these games, which produced championships in the three classes of schools, will appear in the May Scholastic Coach. Manchester emerged at the top team in Class A, Branford in Class B, and Bloomfield in Class C-D.

The story is the same in swimming. Conducted under the ideal facilities generously offered by Yale University, on March 19, there were more schools, more boys and more spectators. The swimming league establishes its championship for the state by a series of dual meets. Hartford Public again took first place this season. The Conference meet is conducted for individual championships only, and has produced at least two national scholastic champions.

The cross-country run, conducted with the cooperation of Wesleyan University last November, might seem like an exception to this added interest theme as there were actually less competitors than heretofore. But the Conference was forced to restrict the number of entries to seven from each school in order to accommodate the larger number of schools which wished to submit entries. In the future it is quite probable that this event will be divided into two or more classes of schools, instead of being an open meet.

The indoor track meet attracted a new high for schools and spectators last year, and will probably establish another record high this year. The same was true of the outdoor track games last year, and undoubtedly the golf and tennis tournaments for boys will bring added numbers next June.

The girls' program is in the hands of a special committee for the first time this year; the committee is headed by Miss Helen Lockwood of the Central High School in Bridgeport. Already her committee has enlisted the interest of 41 schools in a state-wide Play Day program. Since this includes tennis matches, it is expected that there will be no Conference championships for our girls this spring.

Finally, Conference membership reached its peak this year!

WALTER B. SPENCER,
Conn. Intersch. Ath. Conf.,
New Haven, Conn.

Kentucky

Sharpe wins finals

HOMER HOLLAND'S sharpshooters from Sharpe High School, who mowed down St. Xavier, top-heavy pre-tournament favorite, 26-23, in the semi-final round of the state basketball tournament, defeated Maysville's scrappy quintet 36-27 in a hard fought final.

Resident state officials were used exclusively for the first time and the experiment proved satisfactory, few protests being lodged. Yet the returns from a questionnaire circulated by the writer among the sixteen coaches whose teams reached the final round, indicated that the coaches are not concerned so much with the residence of the officials as they are in the quality of the officiating. The question posed was, "Do you favor resident state officials, or the best available?" Only two coaches favored resident state officials while the other fourteen desired the best available. Prior to this year's tournament some of the officials were imported from nearby states.

At a meeting in Lexington of the state Coaches Association, the groundwork was laid for the formation of a Kentucky officials' association and a number of coaches' clubs throughout the state. The coaches approved a proposal to form 64 coaches' clubs—one in each of the 64 districts—each club to meet three or four times a year for the purpose of discussing problems within its district, and questions of interest in the state at large.

Methods of rating officials were discussed and plans made for the formation of officials' placement bureaus throughout the state. A. L. Lassiter of Madison High School, Richmond, presided at the coaches' meeting.

Some interesting meetings are scheduled in conjunction with the annual K. E. A. meeting in Louisville on April

13, 14, 15, and 16. The High School Athletic Association plans to act as host at a banquet for the delegates representing the sixty-four districts, and they are also inviting members of the Coaches Association to attend. The principal speakers at this meeting will be Bo. McMillin and Everett Dean, football and baseball coaches respectively, at the University of Indiana.

The Northern Kentucky high schools have recently conducted several meetings at which plans were made to raise money for an insurance fund for athletes in this area. Leaders in the movement were J. S. Brown, superintendent of schools at Ludlow, and Russell Bridges, assistant principal of the Highlands High School of Fort Thomas.

WILLIAM J. "BLUE" FOSTER,
Kentucky H. S. Coaches Assn.,
Newport, Ky.

Missouri

Houston state champions

HOUSTON High School, coached by Harold Eberhardt, were crowned the Missouri high school basketball champions for 1937-38 by virtue of their triumph in the annual state tournament held in Columbia on March 10, 11 and 12. Cape Girardeau was runner up and Maryville, last year's champions, third. Leadwood finished fourth.

Houston has been a frequent visitor to the state tournament but this is their first state title. The Texas County team downed Independence, Essex, Maryville and Cape in their march to the championship. The new state champions used a double pivot during the entire tournament with Watson, 6 ft. 8 in. center, and Brinzemon, 6 ft. 4 in. forward, at the posts. Teammates fed high looping passes to these big boys who calmly dunked the ball in the basket to provide the Houston margin of victory in every game. The larger high schools in the state had tough sledding in the regionals and only a few reached the finals. Those who did were eliminated in the first round.

Girls unite

A Missouri Girls' Athletic Union was formed at a meeting held in Columbia during the state basketball tournament with delegates from 150 high schools. The plan for the new union is a sports program for girls similar to the one carried out for boys by the state Coaches Association.

This group protested a recent ruling of the state High School Athletic Association limiting girls' basketball teams to one game per week. The Board of Control of the state association agreed to suspend the ruling until the state meeting in November.

College and high school football coaches of the state met during the state tournament and discussed the prospects of six-man football in Missouri.

Don Faurot, head coach of the University of Missouri, discussed the game with visiting coaches and plans were made for a series of district meetings for interested high schools. Faurot pointed out that 160 high schools now play football in Missouri, but that the reduced game might be carried to 245 other schools with 125 or more students.

Also set at this time were the dates for the state wrestling championship, April 1 and 2; the indoor track meet, April 2; Class B and C outdoor state track meet, May 7; and the Class A outdoor state meet, May 14—all these events to be held at the University. Dates for the regional meets for B and C schools to qualify for the state meet will be announced soon. Class A schools, those with more than 500 students, are not required to qualify.

C. E. POTTER,
Missouri H. S. Coaches Assn.,
St. James, Mo.

Texas

Report on finals

EIGHT regions sent representatives to Austin on March 4 and 5 to compete for the coveted state basketball championship. And for the first time in several seasons, a school from one of the larger cities, Woodrow Wilson of Dallas, won.

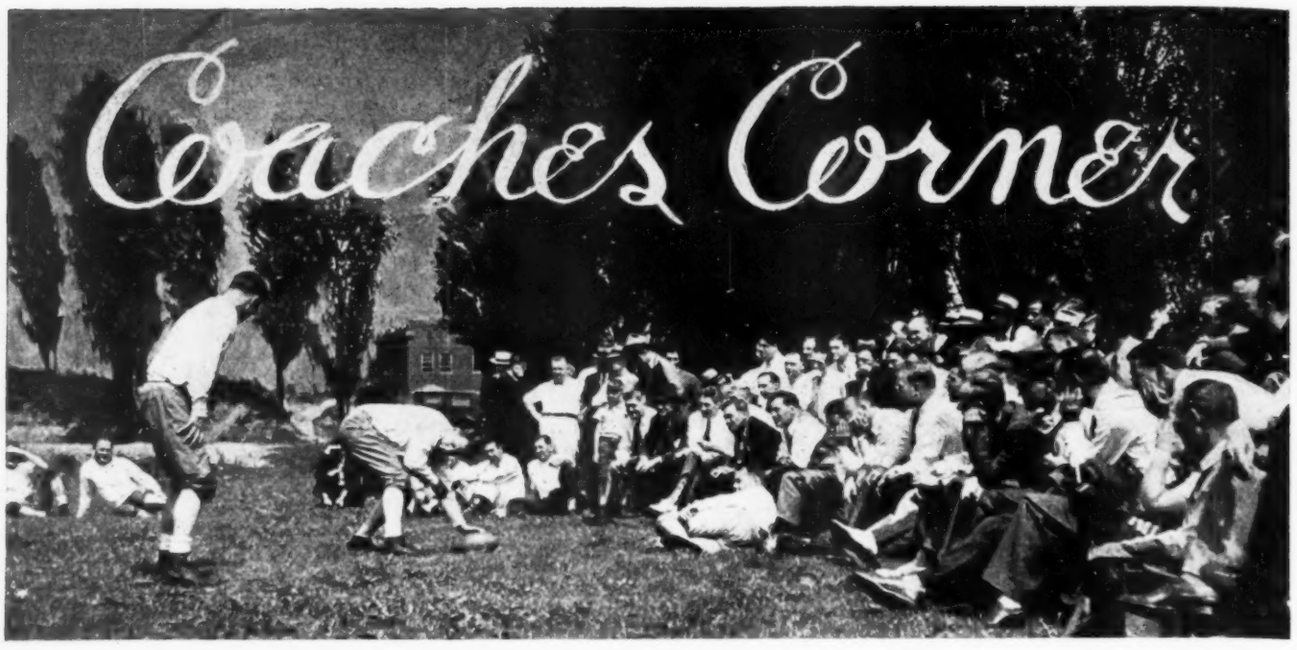
Abilene, one of the state's great teams, undefeated in 24 games before the tournament, drew Carey in its first game and disposed of last year's champions 36-14. The superior speed and experience of John Reagan of Houston stopped Bailey of the east Texas region 37-16. Belton unfortunately drew Woodrow Wilson of Dallas and were defeated 43-24. One of the "dark horse" teams, Bowie High of El Paso, beat Kingsville of South Texas 45-30. The entire Bowie team were Mexican, and had the speed and hustle that sometimes substitutes for ability.

In the greatest game of the tournament, Woodrow Wilson beat John Reagan in the quarter-finals 29-28 in the last few seconds of play. Abilene defeated Bowie 29-27 in probably the worst game; Abilene led 22-9 at the beginning of the last quarter.

The finals found Woodrow Wilson at their peak and they swamped Abilene 41-27. Despite Abilene's valiant battle against a superior team, at no time was the outcome doubtful. Woodrow Wilson sank 17 out of 49 tries from the field while Abilene dropped 10 of 36 tries. The Bowie, El Paso and Kingsville schools which played in the state tournament are more than 1000 miles apart.

Roy B. Henderson, head of the Interscholastic League Athletic Department, died on February 13. The coaches of Texas lost a man who had been most instrumental in developing the Athletic Department to its respected position among such organizations throughout the country.

GOOBER KEYES,
Texas H. S. Football Coaches Assn.,
Lubbock, Tex.



If you have something for this column send it to Bill Wood, University High School, Iowa City, Iowa.

For the prize story of the month honors are about even for the next two. Credit Rollie Williams, the genial University of Iowa mentor, with the first one.

"It had been one of those slow, deliberate games in which the players went about their business in a methodical, somewhat listless fashion. A guard was bouncing the ball carefully in the back court waiting for something to happen when a customer from the third balcony bleachers bellowed: 'What the Hell do you birds think this is, a W.P.A. project?' "

Al Mooney of Chaska, Minn., ties the score with this one.

"With the half just about over, the home team was trailing 15 to 1. One of the home fans got up and called to his partner, 'Come on, Pete, let's get out of here before they scratch and lose that point.' "

The winters get pretty severe in the great Northwest, but basketball carries on in spite of the worst the weather man can do. Athletic Director R. Bradner of Streeter, N. D., forwards the following incident:

"As you have invited us all to send in things that are true and out of the ordinary, I am sending you the following account of an experience that I shall never forget. With a record of 27 victories out of 37 starts since November 9, we felt that we were strong contenders for the tournament championship along with Eldridge, the only team in our county to hand us a defeat during the regular playing season, just as we were the only team in the county to conquer them. Two days before the tournament was to get under way at Jamestown, one of our famous North Dakota blizzards descended on us. Since there had been already two feet of snow on the ground, it soon became impossible to travel even by horse, and there we were fifteen miles from Highway No. 10, where we could catch a bus.

"On the day before the tournament was scheduled to start, the storm had eased up a little but it was still windy and several degrees below zero. Yet the boys decided to hike to No. 10 rather than miss a chance to play. Superintendent Newman offered to go along with us and provided a rope line which each one of us tied around his waist to keep from getting lost from the rest of the group. We left Streeter at 10:00 in the morning and arrived at the highway at 5:00 in the afternoon. Everyone had his face frozen a little.

"At 9:30 the next morning we met Medina, one of the better teams in the tournament, and barely edged them out, 18 to 17. With a little more rest we won easily that night from Courtenay. The next day we met Eldridge in the semi-finals and lost, but they had a strong team and considering the hardships we had undergone, our boys felt that they had really 'played the game.' "

The contribution of Wallace Gotham, coach of Ray High School, N. D., just got in under the wire, but it's a winner!

"We were playing at one of the neighboring towns last year. Against their rather weak team we were using a man-to-man defense. One of my forwards was acting queerly. He would seem to lose his man, suddenly look up and pick him up again, stay with him a minute, and then let him get away again. Since the other team was not doing much scoring, I let him stay in until the second quarter. After he had been sitting on the bench for a little while, I asked him what had been his trouble out there on the floor.

" 'You know, Coach,' he said, 'I was trying to decide whether I should drop bookkeeping and take typing next semester, or keep on with the bookkeeping.' "

Sports columnist Louis Greene of the *Minneapolis Tribune* calls attention to the unusual athletic record of the Hoyme brothers of Jasper, Minn. Every season for the past eighteen years there has been a Hoyme on the Jasper High School teams. Seven of the eight boys have served as captains.

The busiest man in basketball is John Soso of Big Pine, Calif. He has a really unique coaching combination.

"During the present basketball season I coached the regular high school boys' team, a women's town team, a men's town team on which I also played, and an all-Indian town team. Quite a program for any one man to coach in any one evening, don't you think?"

Coach Harry D. Stahl of De Ruyter, N. Y., makes a plea for more articles about girls' basketball. He reports three sisters on his first team—Mildred, Levine and Maxine Dolly—who are almost identical in height and weight. On his second team, the same situation holds true. The "sized-alikes" are Barbara, Rachel and Mary Smith.

The players at Ambridge, Pa. make life interesting for Coach Moe Rubenstein by insisting upon doing the unusual. Twice during the season they turned in perfect free-throwing performances; against Beaver Falls they made eleven straight and against Rankin hit thirteen without a miss. Their game with Erie Academy ended in a tie score 47 to 47.

By way of celebration Coach Rubenstein took the boys to see their first hockey game. The Pittsburgh Hornets were leading the New Haven club 1 to 0 late in the final period. When one of the Hornets' wing men began to advance the puck rapidly, Eddie Ulinski, Ambridge basketball guard, could stand it no longer and yelled, "Freeze it! Freeze it! Fifteen seconds to go!"

Officials will probably be shooting for some time at the record hung up by Froebel Gaines, baseball coach at Webster Groves, Mo., High School. His interesting letter follows:

"The final game in the Highland, Ill., District Tournament was the 1000th game that I have officiated in the last ten years, and was reported on in the East St. Louis *Journal* by the sports editor, Ellis Veech, who was the other official. The next week while working in the Belleville sectional finals, in which East St. Louis beat Granite City in an overtime period, an enthusiastic East St. Louis fan called out, 'Well, come on, Gaines! After a thousand games you ought to be able to see at least one foul against our side.'"

Gresham, Ore., must be an unusually attractive place. Coach Frank Bartholomew reports the following states appeared on the state eligibility lists as the birthplaces of the boys who competed under him last year: Oregon, Washington, Montana, Nebraska, Idaho, North Dakota, Pennsylvania, Louisiana, Texas, Oklahoma, Iowa, California and South Dakota. In addition, two of the boys gave Alberta, Canada, as their birthplace.

In their effort to be different five of the first six cagers of Manning, Iowa, High resorted to tattooing. The sixth couldn't raise the tattoo fee to get his name on his arm.

Coach George Coviness of Vega, Tex., says that he noticed an item from De Witt, Ark., in the March *Scholastic Coach* that he can beat.

"With a football squad of seventeen men we won eight out of ten games this past season. We did not hold a single scrimmage after the game schedule got under way, and we had no injuries during the entire season."

In the Northern Vermont high school baseball league last spring, Montpelier and Burlington were the *two* teams playing. Montpelier led 8 to 7 in the last of the 9th, with *two* out, *two* on, *two* balls and *two* strikes on Dodds, who had pitched *two* innings. Dodds hit for *two* bases, driving in *two* runs, thereby winning victory number *two* for Burlington in her first *two* games of the season.

Coach O. W. Jay of Burlington sent that one along.

The writer wishes to close his column this month with a verse in memorial to one who was a real sportsman—his father, who died on Monday, March 14. The verse is from Robert Louis Stevenson:

Under the wide and starry sky
Dig the grave and let me lie.
Glad did I live and gladly die,
And I laid me down with a will.
This be the verse you grave for me:
Here he lies where he longed to be;
Home is the sailor, home from the sea,
And the hunter home from the hill.

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The New High School Discus

(Continued from page 7)

27 juniors and 27 sophomores. In the high school group there were 24 seniors, 23 juniors and 23 sophomores.

On the basis of mean scores obtained, indices were established as shown in the following table.

Mean Measurements of 70 College and 70 High School Athletes

	College	School
Leg strength (lbs.)	595.9	494.3
Back strength (lbs.)	425.0	327.1
Right grip strength (lbs.)	131.0	109.0
Left grip strength (lbs.)	125.0	100.0
Chest pull strength (lbs.)	103.2	85.2
Chest push strength (lbs.)	121.6	101.2
Finger pull strength (lbs.)	145.5	117.2
Strength index (lbs.)	1648.0	1334.0
Width of hand (in.)	3.8	3.6
Length of hand (in.)	8.0	7.7
Size index (in.)	11.8	11.3
Height (in.)	71.3	68.8
Weight (lbs.)	178.3	143.2
Age (years)	20.5	16.5

Since the weight and size of the collegiate discus is recognized as suitable to the strength and to the size of the hand of the college athlete, it follows that the high school discus should be changed so that its size and weight bears the same relationship to the high school athlete. The following calculations show the modifications of the collegiate discus necessary to establish such a relationship.

Weight calculations. The following proportion states the relationship between the mean strength indices of the two groups and the weights of the discuses.

$$\frac{\text{Strength index (coll.)}}{\text{Strength index (school)}} = \frac{\text{Wt. (coll. discus)}}{\text{Wt. (school discus)}}$$

In which:

Strength Index (college)=1648.0 lbs.

Strength Index (high school) =1334.0 lbs.

Weight (collegiate discus)=4.4 lbs.

Weight (high school discus)=X lbs.

Substituting these values in the above equation we have:

$$\frac{1648.0}{1334.0} = \frac{4.4}{X}$$

X=3.56 pounds (weight of the high school discus).

Diameter calculations. The relationship between the size of the hands of college men and high school boys, and the diameters of the discuses may be stated:

$$\frac{\text{Length + width (coll.)}}{\text{Length + width (sch.)}} = \frac{\text{Diam. (coll. discus)}}{\text{Diam. (sch. discus)}}$$

In which:

Length of hand (college)=8.0 in.

Width of hand (college)=3.8 in.

Length of hand (high school)=7.7 in.

Width of hand (high school)=3.6 in.

Diameter (collegiate discus)=8.62 in.

Diameter (high school discus)=X in.

Substituting in the above equation we have:

(Concluded on page 40)

On the Opposite Page

Housed in the huge Atlantic City, N. J., Auditorium, the commercial exhibits at the N.E.A. convention of the American Assn. of School Administrators this year were the largest and finest in convention history.

Several of the exhibits which were of particular interest to athletic directors and coaches are shown on the opposite page. In No. 1, Frank Herschede, widely known representative for P. Goldsmith Sons, Inc., clinches a sale with G. B. Sargent of South Bend, Ind.

Surrounded by sanitary products and devices in No. 2, Joseph A. Martinka of the West Disinfecting Co. (right) and an associate pause to oblige. General Manager Hillyard of the Midland Chemical Co. (left) exchanging notes with his New York manager, Martin Marks, in No. 3. The man in charge of the EverWear Mfg. Co. display in No. 4 is not offering to "swing the lady," but is merely driving home some points on playground equipment. Time out in No. 5 while J. H. Longshore (with hat), president of the Continental Car-Na-Var Corp., and an associate, relax.

Probably an athletic director in search of a safeguard against athlete's foot, the gentleman with his back to the camera in No. 6 poses some questions of E. W. Thomas, representative in charge of the C. B. Dolge exhibit. In No. 7, a group of school men discuss gym floor problems at the Hillyard Chemical Co. booth. No. 8 shows the telescopic gym seats of the Fred Medart Mfg. Co. which elicited much interest. The attractive Colgate display of products for wash and shower rooms are shown in No. 9.

High School Discus

(Continued from page 39)

$$\frac{8.0 + 3.8}{7.7 + 3.6} = \frac{8.62 \text{ (inches)}}{X \text{ (inches)}}$$

X=8.25 inches (diameter of the high school discus).

Thickness calculations (center). The relation between the thickness of the dicuses (at their centers and one inch from their centers) and the size of the hand of the two groups is stated as:

$$\frac{\text{Length + width (coll.)}}{\text{Length + width (sch.)}} = \frac{\text{Thick. (coll. discus)}}{\text{Thick. (sch. discus)}}$$

In which:

Length of hand (college)=8.0 in.
Width of hand (college=3.8 in.
Length of hand (high school)=7.7 in.
Width of hand (high school)=3.6 in.
Thickness (collegiate discus)=1.75 in.
Thickness (high school discus)=X in.

Substituting in the above equation we have:

$$\frac{8.0 + 3.8}{7.7 + 3.6} = \frac{1.75 \text{ (inches)}}{X \text{ (inches)}}$$

X=1.67 inches (thickness of the high school discus).

Thickness calculations (rim). The relation between the thickness of the discuses, (¼ inch from their rims) and the size of the hands of average college men and high school boys is expressed as:

$$\frac{\text{Length + width (coll.)}}{\text{Length + width (sch.)}} = \frac{\text{Rim thick. (coll. dis.)}}{\text{Rim thick. (sch. dis.)}}$$

In which:

Length of hand (college)=8.0 in.
Width of hand (college)=3.8 in.
Length of hand (high school)=7.7 in.
Width of hand (high school)=3.6 in.
Thickness ¼ in. from rim (coll. dis.)=½ in.
Thickness ¼ in. from rim (sch. dis.)=X in.

Substituting in the above equation we have:

$$\frac{8.0 + 3.8}{7.7 + 3.6} = \frac{.50 \text{ inches}}{X \text{ inches}}$$

X = .48 inches (rim thickness of the high school discus).

The adjusted discus

On the basis of the calculations presented, a discus having the following dimensions and weight is suitable for use by the high school boy. For practical purposes, the thickness at the center is rounded off to the nearest ⅛ inch. In the case of weight, the value is rounded to the nearest ounce.

Diameter—8.25 in. (8¼ in.)
Thickness (at center)—1.67 in. (1⅝ in.)
Thickness (¼ in. from rim)— .48 in.
Weight—3.56 lbs. (3 lb. 9 oz.)

HERE BELOW

(Continued from page 5)

bring to an end American track and field supremacy. Whether this is so or not, the legislation is certainly a bitter pill to swallow. In recent years, the United States track and field teams have had a large proportion of college men on the squad. Though our top-notch athletes might be given leaves of absence by their colleges in 1940, they still would be risking the loss of at least a half year of school.

UP TO the final stages of the nine-day Olympic Committee conference in Cairo, Japan was a divided house on the question of accepting the Olympic Games. The army was definitely committed against holding the Games in Japan and the military bloc announced that they would prohibit soldiers on the active list from participating. Although the Japanese delegates prevailed upon the government not to cancel the Games, the next Nipponese Olympic team will have to struggle along without the soldiers.

This is in direct contrast with the benevolent attitude Mussolini took toward the 1936 Olympics. Benito excused his soldiers from "war" duty in Ethiopia to compete in the Games at Berlin. The Japanese soldier athletes are not so "fortunate." While their comrades at home are covering themselves with glory in Tokyo, the soldiers, for exercise, will have to be content with chasing the Chinese army from Manchukuo to Tibet.

•

Rugby Invasion

Cambridge University's rugby team conclude a five-game invasion of the United States against a picked all-East fifteen at the Polo Grounds, N. Y., on April 9. The Cantabs have already trounced Yale, Harvard, Princeton and a New York all-star team.

The squad was in charge of P. M. Heywood, who managed the all-conquering Cambridge team which toured America in 1934.

THE COACH'S BOOK LIST

BASKETBALL

Better Basketball, by Forrest C. Allen, $4.

100 Drills for Teaching Basketball Fundamentals, by Blair Gullion, $1.

Basketball Offensive Fundamentals Analyzed, by Blair Gullion, $2.

Winning Basketball, by Nat Holman, $2.

Secrets of Winning Basketball, by Mark A. Peterman, $1. (Price reduced.)

Lowry's Basketball Score and Scout Book, 65c.

Modern Basketball for Girls, by Meissner and Meyers, $1.

Sayger Illustrated Series

Pittsburgh's Offense, by H. C. Carlson, $1.

Indiana's Offense, by Everett Dean, $1.

Ohio State Offense, by Harold Olsen, $1.

Butler Offense, by "Tony" Hinkle, $1.50.

Basketball's Assistant Coach, by Hinkle and Sayger, $3.

TRACK AND FIELD

Track and Field Athletics, by Tuttle and Bresnahan, $3.25.

The Story of the Olympic Games, by John Kieran, $3.50.

The Olympic Coach, by Lawson Robertson, $3.50.

Track and Field, by Charlie Paddock, $2.50.

FOOTBALL

Manual for Functional Football, by John DaGrosa, $5.

Functional Football, by John DaGrosa, $3.

The Five-Man Defensive Line, by John DaGrosa, 50c.

Football Line Play, by B. F. Oakes, $3.

Practical Football, by H. O. Crisler and E. E. Wieman, $3.

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Ohio State's Offense, by Francis Schmidt, $1.50.

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Michigan's Offense, by Harry Kipke, $1.50

Purdue's Offense, by Noble Kizer, $1.50.

Rainy Day Coach, by Anderson, Kizer and Sayger, $4.

SWIMMING

How to Teach Swimming and Diving, by Thomas K. Cureton, $3.

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The Teaching of Stunts and Tumbling, by B. and D. Cotteral, $3.

Active Games and Contests, by Mitchell and Mason, $3.

Squash Racquets, by John Skillman, $2.50.

Primitive and Pioneer Sports, by Bernard S. Mason, $2.50.

The New Trainers Bible, by Dr. S. E. Bilik, $2.50.

How to Play Lawn Tennis, 50c.

Safety in Athletics, by Lloyd, Deaver and Eastwood, $3.25.

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